VIOLENCE IN PUBLIC ORGANIZATIONS: ADAPTING CONTEMPORARY THEORY TO THE CASE OF SCHOOLS

A Dissertation

by

WARREN STEVENS ELLER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2006

Major Subject: Political Science

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Approved by:

Chair of Committee,	Kenneth J. Meier
Committee Members,	B. Dan Wood
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	Donald Deere
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ABSTRACT

Violence in Public Organizations: Adapting Contemporary Theory to the Case of Schools. (May 2006)

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Chair of Advisory Committee: Dr. Kenneth J. Meier

Violence in American schools has declined significantly over the last two decades but still remains an important topic on the public agenda. This unusual dialectic, driven by the recent increase in extreme cases of violence, has fostered a renewed interest and scholarship in school violence and public policy focused on reducing this phenomenon. At present, schools across the nation are adopting and implementing policies based on past research to combat this new wave of school violence; however, the majority of the research in this area is limited to evaluations of the immediate problem in a localized region, or are a theoretic government reports that focus on correlates over causes and offer little guidance for understanding the policy environment.

This dissertation takes a first pass at large-scale quantitative evaluation of violence in schools. I begin by adapting contemporary policy theory and blending it with contextually applicable causal models. I then test three separate aspects of this policy area. First I examine if institutions do have control over extreme behavior within their purview. Second, I examine the organizational covariates with violence. Finally, I examine the policy system including outputs, effects and actor influence within the subsystem.

I find that schools are not simply victims of the external environment, but victims of the political environment. There are no substantive reductions in violence associated with any specific prevention measure; however, there are dramatic consequences when school administration or programs focus on this event.

DEDICATION

This is dedicated to Alex, Andrew, Danny, Evelyn, Jillian, and all the other good kids that deserve better than what we currently offer. Also, this is dedicated to my Wife and Duke.

ACKNOWLEDGEMENTS

The dissertation process is a strange and wonderful course. Among the many peculiarities in the process is that the first part of the paper is actually the very last thing written. While there are a million things that should be said, it is difficult to encourage even a sentence from the keyboard. If this text is ever really read, the reader should bear in mind that while this note of thanks is short, these few words should speak volumes. There are obvious people to thank for various contributions, and there are some less obvious.

First among the usual suspects are most importantly my parents, without whose unwavering support, none of this would be possible. Also equally important is the contribution of my committee which is responsible for much of who I am and am not professionally. Ken Meier is by far the best friend a student will have. I could write several pages about Ken, but I will simply say that I was fortunate to have him as a mentor and am proud to count him as a friend. Similarly, Bill West has been a good friend, mentor and colleague. I cannot think of a time I have ever had a conversation with either of these two when I did not learn something. Poor Donald Deere got suckered into membership on my committee and I am quite happy he did! Although I have only had a few conversations with Donald, he has probably helped me more than he will ever know. With a few words, the endorsement of ideas, and positive input he was a significant part of my finding closure to this project.

As with any event, the unusual suspects are those who are most interesting. Not as much for the surprise value, but more for the interesting way informal networks are so vitally important. First on this list are Jeff Worsham and Gerald Pops. I am not sure

where I would be at this point if not for these two, however, I am quite sure it would not resemble where I am. If I recall correctly, Jeff talked me into not only my masters but also my doctorate in no more than three conversations in a gym in Morgantown WV. I think his words were something as, "Well, if you like this stuff, why not go down to Texas and do it for real with Ken Meier?" This one simple sentence changed my life (and probably shortened Ken's!). Similarly, Dr. Pops proved to be a good friend and confidant, while working diligently to get the Ellers' prodigal son into a masters program. Both Jeff and Gerald demonstrate that good teaching can be done, however, there are many who have demonstrated just the opposite. Just as good teaching generates a desire to "pay it forward," bad teaching encourages a longing to do it better. I have had several professors teach me this lesson, but none as sharply as Dick Brisbin.

In addition to these professors in my past, there are many professionals who have inadvertently motivated this work. Ritchie Taylor and Jeff Berryman are amongst the best public servants I have known and constantly reaffirm my belief that the system works. Both have taught me much about virtue, work ethic and steadfastness. They both have also taught me that one can be multidimensional, personable and effective. Ritchie specifically, has taught me more about what public servants *should be* than anyone else in my past.

Many friends have helped me along this journey. My thanks go out to Mike Pennington first and foremost. A great human and fantastic friend, anything is possible with Mike on your side! Moreover, I would like to thank Tim Nurkiewicz, James Miller, Alisa Hicklin, Alesha Doan (in spite of the advice she gave me about committees), Belinda Bragg, Jim Cottrill, Sean and Jill Nicholson-Crotty, Matt Eshbaugh-Soha,

Danette Brickman, Mel Hohlt, and Jeff Peake. All of these individuals have helped me significantly along my way. In addition, Hank Jenkins-Smith and Carol Silva also deserve a special note of thanks.

Finally, I would like to thank generally the faculty and staff of the Department of Political Science at Texas A&M, and the Department of Public Administration at West Virginia University. Without the help of people like Debbie Koon, Brad Epps, Ludim Garcia, Lou Ellen Hurr, Avis Munson, Carl Richard, and Carrie Kilpatrick I would have never been able to navigate the sea of chaos through which this process led.

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CHAPTER I

INTRODUCTION

In 1996, Brad and Cassie Bernall pulled their daughter from the school where she attended the ninth grade. The Bernalls were concerned for their daughter's safety at the high school she attended so they transferred her to a new school where their daughter would be educated in a safe environment. Two and a half years later, the Bernall's daughter, Cassie, was a senior at her new high school (Bernall 1999). Cassie was a good student, involved in student activities, the church and popular with her classmates. One of her friends, Justin Boggus, described her as "the kind of girl who was always happy, no matter what. She loved God. She loved the world (Crowder 1999)."

The morning of April 20, 1999 started like any other for Cassie. She woke up in the morning and dressed for school, stopping only long enough to say good-bye to her mother and pull on her Doc Martin's before hurrying out the door on her way to school. Cassie attended her morning classes as usual, then, during the first lunch break, headed to the library to catch up on some homework for her English class. Crystal and Emily, close friends of Cassie's were in the library working on the very same assignment. It was about eleven o'clock in the morning as Cassie and Emily headed to the back of the library to study. Fifteen minutes later, everything in Littleton, Colorado would change forever (Bernall 1999).

This dissertation follows the style of *American Journal of Political Science*.

Two calls came in to the Jefferson County Sheriff's office at the same moment that Cassie entered the library in her school.[1] The first reported an explosion at one of the four major intersections in town. The second was from a teacher named Peggy at Columbine High School. Peggy identified herself, and reported that there was a student with a gun who just shot out a window. She also stated that when she asked a student in the hallway what was going on, he turned and shot at them. Peggy reported that the student standing beside her got hit. As smoke rolled down the hallway, Peggy hurried all the school children to the floor and under the tables for safety (Jefferson County Sheriff's Office 1999).

In the back of the library, Emily and Cassie hid beneath a table and Cassie began praying out loud. Moments later, Dylan Klebold suddenly slammed his hand on the table beneath which the two girls were hiding and yelled "Peek-a-boo (Cullen 1999)." Without saying a word, Klebold shot Cassie at point blank range. It wasn't until the next day that law enforcement confirmed that Cassie Bernall was killed in the assault on Columbine High School (Bernall 1999).[2] Cassie was one of thirteen people killed and twenty-one wounded in the killing spree executed by two young high school students on that April morning.

Columbine was a special event insomuch as it focused national attention on safety in schools, but it is certainly not a unique event. Multiple homicide attacks in schools are currently both a national and most recently international problem. April 27, 2002, Erfurt

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[1] The exact times of calls and when students were where is a matter of some dispute. The many official sources of data list different times for identical events, although time lapses on all these sources are very similar. Because the exact moments of these events are not central here, I do not provide them.

[2] There are some inconsistencies surrounding the final events of Cassie's life. Several news outlets and a best selling book make reference to discourse between Cassie and her killer, but equally reliable outlets claim that no words were exchanged. The strongest evidence suggests that Cassie and her killer exchanged no words of consequence, and conversation or not, she is still dead.

Germany was the last city to join the dubious club of cities that have been forced to deal with school homicide (Infoplease 2002).

Columbine was a tragedy, but it is not the starting point for this trend of violent school deaths. As tragic as the events on that April morning were, they were not the first time the United States dealt with homicide or even multiple homicides in a school environment. Drive by shootings and fights with weapons have plagued schools for a long time. What media pundits claim separate the event at Littleton from other types of homicide is that these new events are deliberate, calculated and completely random in occurrence.

Even with this definition, the event at Littleton was not the first. In February of 1996, fourteen-year-old Barry Loukaitis walked into his junior high algebra class and killed the teacher, two students, and wounded a third. In October of 1997, sixteen-year-old Luke Woodham knifed his mother to death before going to school and shooting nine students. In December of that same year, fourteen-year-old Michael Carneal killed three students and wounded another five. These same scenes took place on March 24th in Jonesboro, AR; April 24th in Edinboro, PA; May 19th in Fayetteville, TN; and May 21st in Springfield, OR in 1998; April 20thin Richmond, VA; and November 16th in Conyers, GA in 1999; and on February 29th of 2000 in Mount Morris, MI. Ages of the perpetrators range from six to eighteen, and all these events took place in the school. More recently, shootings have taken place in 2001 on November 12 in Caro, Michigan; in 2002 on January 15th in New York, NY; on February 19th in Freising, Germany; on April 14th in New Orleans, LA; April 24th in Red Lion, PA; on September 24th in Cold Spring Minnesota (KSS 2004). This brief list is not exhaustive, yet it demonstrates the existence

of extreme violence in schools both before and after the incident at Columbine. Between 1992 and 2001 more than 19 separate events of multiple homicides by children have occurred in American schools.

What This Project Is About

This manuscript is centered on the overarching question of *how is public policy focused on organizational violence affecting the larger policy subsystem?* This question is addressed in the subsystem of educational policy. Embedded in this thesis are two important sub-questions. First, is violence in schools actually a phenomenon that can be manipulated by the organization, or is this simply a reflection of the larger environment over which the school has no control? Second, given that organizations matter, what is the effect of public decisions related to education and violence in schools have on these institutions?

More simply, this project is a look at managing violence in organizations. Until now, extreme violence has been dealt with in three different ways. First, scholars presented individual case studies of extreme violence perpetrators. Their effort is to understand the workings of each individual (or group) of perpetrators. This approach offers detailed analysis of the individuals and individual traits of children who might commit an act of extreme violence. Unfortunately, these types of studies offer little in the way of predictive power. While offering commonalities of dysfunctions is useful in a sense, generalizing the knowledge we gain to solutions that do not present huge opportunity costs to the organization at hand is difficult.

The second approach to studying extreme violence examines the victims over the short-term and long-term. Typically, these types of projects deal with the mental and

physical ramifications to individuals traumatized by the incident. These studies benefit us insomuch as offering policy options for after-event implementation; however, they have two major shortfalls. First, they do not provide any possibilities for prevention. While after-care of victims is extremely important, the best care is prevention of the incident in the first place. Second, they often are very unsophisticated in scope. Most of these studies deal with the immediate victims and the immediate effects of the trauma. They do not, however, deal with the macro costs to both the individuals and the community they examine.

The final approach to studying extreme violence is the application of the prior two. These are the policy papers that generate policy propositions based on the findings of case studies of either perpetrators or victims. These studies usually suggest programs without testing outcomes, and those that do test outputs normally test only the rate of violence. While these types of studies offer us some insight as to the absolute effectiveness of the programs, they typically offer no leverage in respect to the relative effectiveness. That is, they tell if there is a decrease in the violent events, they do not tell us much about the cost of that reduction. All of these techniques are similar in that they deal with individuals. This project differs in that my main focus is the organization.

By focusing on the organization, this study provides several advantages over individual level studies. First, individual level solutions must be applied to an individual. This means that *before* a treatment can be administered, an individual at-risk for committing extreme violence in schools must be identified. Identification processes are time consuming and require a high degree of expertise to perfect. When dealing with violence, many identification techniques rely on teachers as a primary source of

identification and some even depend on student identification of possible offenders. By contrast, organizational level solutions create structures that end or greatly reduce the probability of extreme violence in an institution. These solutions are not individual specific insomuch as the treatment does not rely as highly on the skills of an individual. Additionally, structural changes are typically less expensive in terms of time and resources than individual treatments. This means that there will be a great savings in resources that can be devoted to education.

Second, organizational level solutions are, by definition, implemented at a higher level within the school. This means that there are less "links" in the implementation chain. Fewer links means that there are fewer places where the implementation can breakdown. Finally, organizational level solutions represent a more top-down policy process than does an individual level solution. Maintaining a top-down approach serves to limit the numbers of areas where policy can be influenced by other groups (Dye 2001). It maintains a logical flow through a hierarchical organization, and can be applied more easily to a hierarchical bureaucracy than can an individual, bottom-up approach.

Theory for theory sake is fine; however, school violence is an area where the nature of the social dysfunction demands theory that is applicable. For this reason, I approach this project with two key theoretic goals: First, I review theories of why extreme behaviors manifest themselves to determine which of these theories is useful at the organizational level. I then address how these manifestations are theoretically manipulated at the agency level, and how the outcomes are produced by that manipulation. The theory that is most valuable is the theory that can be broadly applied

at the organizational level and not theory that must be implemented at the individual level.

Why Study Schools?

There are many good reasons to study schools. Schools are a place where we send our children with the expectation that they will be educated, protected and supervised. Public education represents an agreement between government and electorate that implies in return for tax contributions, government will produce educated youths able to assume a productive role in society at some given point. Aside from this normative argument for studying schools, there are also several important theoretical components to this line of inquiry.

Schools represent the largest segment of the bureaucracy; and because they are the most prolific singular manifestation of the bureaucracy, schools are the most common point source for policy implementation in America. These two facts mean that research of school policy allows us to gain insight to both organizations and policy implementation.

Several policy scholars[3] seem to generally accept this notion that schools are bureaucracies and are generalizable to other governmental organizations; however, political science research seems to ignore this fact. Political science of late seems to ignore the importance of schools in the systematic study of bureaucracy. Many important works in the systematic study of bureaucracy have been based in educational settings. Weber (1946) identifies several key characteristics of bureaucracy. Task specialization,

[3] For example: Wilson 1987; Anderson 1997; Peters 1996; Rushefsky 1990; Cochran & Malone 1995; Dye 1988. This list is not inclusive, and only represents textbooks that include education policy as a generalizable form of public policy. This does not include several texts on education policy specifically nor numerous journal articles on the subject specifically.

hierarchical structure, reliance on standard operating procedures, standardization and objective-based positions. Obviously schools fit these most basic requirements of bureaucracy. Blau (1956) espouses a somewhat more liberal view of bureaucracies. He states "The type of organization designed to accomplish large-scale administrative tasks by systematically coordinating the work of many individuals is called a bureaucracy" (14). He continues, "Bureaucracy is not confined to the military and civilian branches of the government, but is also found in business, unions, churches, universities, and even in baseball" (14). Additionally, Wilson (1989) begins his seminal work on bureaucracy with examples of what he terms "three common and important kinds of government organizations" (10). Wilson's triad includes armies, prisons and *schools*.

In addition to being typical and common bureaucracies, schools also maintain an important role in public policy. Peters (1993) briefly addresses the importance of schools in American public policy. He highlights the important court cases such as *Brown v. Board of Education*, the distinct federalism questions inherent to education, and contemporary issues in education policy that are reflexive of traditional American values. Peters is only one of a long list of policy analysts that have utilized education policy to evaluate American policy as a whole. Schools are a bountiful medium for the study of policy and bureaucratic politics.

Why Study Violence in Schools?

This gruesome timetable of extreme violence offered in the first couple paragraphs does not tell the whole story behind school violence. While the purpose of this project is to examine this phenomenon, the escalation in the level of brutality of violence in schools is not indicative of the actual levels of violence in our schools (DoED

1999). In actuality, the National Center for Education Statistics' indicators of School Crime and Safety 2000 reports the number of serious violent crimes and theft has declined since 1992. Additionally, a survey of students who have been victims of school crime and violence showed a decrease from ten percent to eight percent since 1995 (Canady, Stark and Naumann 2001). A Study by the US Department of Education found that "overall school crime, including theft, rape, sexual assault, robbery, aggravated assault, and simple assault declined by one third between 1992 and 1998 (DeVoe, et al. 2004)."

While actual numbers of violent and non-violent acts have decreased in American schools, public opinion has not reacted in kind. In Texas, more than ninety percent of individuals surveyed consider school violence a serious problem. Furthermore, eighty-two percent said they were worried that a school shooting similar to the one in Santee, CA could occur in their neighborhood (Markley 2001). Jay Tarrow describes this as a case where we do not have an epidemic of violence, but one of fear (Markley 2001).

A 1998 national survey of 15,877 middle and high school students found that more than one in three students do not feel safe at school (Josephson Institute of Ethics 2001). Similarly, the *Add Health* study of 10,000 high school students from 134 schools across the country reported that more than one of every four students surveyed had carried a gun or knife in the past year. The Center for Disease Control's 1999 Youth Risk Behavior Surveillance project reported that between two and sixteen percent of students felt too unsafe to go to school and that seventeen percent had carried a weapon in the past 30 days (Miller & Chandler 2003).

Cursory evidence would suggest that the problem of violence in schools is one we have in hand, that now all that remains is the publicity problem. This statement is not entirely true. Although schools are safer than they were just a decade ago, we must decide if the current levels of violence are acceptable. In other words, have we reached a point where the total amount of violence is a reasonable tradeoff for the other products we receive from schools? If the answer to this is no, then there are two important problems. First, the levels of violence are escalating. While the actual number of violent acts is dropping, the severity is on the rise and the public has taken notice. The fear created by the attention given to the severity of recent violence in schools has obviously led students to participate in behaviors that increase the probability of violence. If a good student carries a knife because he does not feel safe, then there is an inherently greater probability that that knife will be used than if it were left at home.

For instance, an unarmed student who is picked on is being bullied. This student can either fight back or flee. This situation is certainly bad; however, this is a state of affairs that can be resolved without the loss of life. On the other hand, an armed student who is being picked on has the option to flee, to fight back *or* escalate the level of violence. In the first scenario the probability of a weapon being used is zero while in the second scenario the probability is something greater than zero. While we cannot accurately estimate the overall probability change for the likelihood, it is certainly significantly greater than zero.[4] When we talk specifically about firearms, there are additional hazards.

[4] To estimate the actual change in likelihood, we would need to have accurate numbers for how many times students carried weapons and how many times they resorted to those weapons in the face of a threat. There is no way to accurately generate these data.

The old saying, "guns don't kill people, people kill people," is not always exactly correct. Roughly three percent of all gun homicides are a result of an accident. Because guns provide an individual with the ability to project a tremendous amount of power over distance,[5] they also provide a greater hazard than traditional mêlée weapons. Additionally, because firearms are more mechanically complex than knives or clubs, they require both greater skill and maintenance to keep them from accidentally causing an injury. Accidental deaths by firearms are a fact.[6] Three Metropolitan Life Insurance Company studies found that 27 percent of accidental shootings came from playing with a weapon and 12 percent came from examining or demonstrating a weapon (Kleck 1997; MLIC 1968). If guns are not present in schools, than these behaviors could never happen.

Second, the increased attention has caused a great number of new policies and procedures to be adopted by schools in an effort to reduce the possibility of extreme violence. Currently, schools are so under-funded that teachers are compensated poorly, buildings are in disrepair and non-fixed assets are diminishing. Every dollar diverted to programs designed to combat violence further reduces the resources schools have to educate children. This means that we will not see the opportunity costs of these violence programs until the damage is too far-gone.

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[5] The average .45-caliber ammunition is loaded with a 230-grain projectile with a muzzle velocity of about 850 feet per second and about 370ft/lbs of energy at the muzzle and 305ft/lbs at 100 yards. The 9mm cartridge with a 124-grain projectile making about 1120 ft/sec at the muzzle produces 345 ft/lbs of energy at the muzzle and 255ft/lbs at 100 yards. The .22 caliber rim fire with a 30-grain bullet making 2200ft/sec at the muzzle produces 325ft/lbs of energy at the muzzle and 120ft/lbs at 100 yards. For comparison, a study of police shootings has found a 94% one-shot-stop (OSS) rate for the .45 and a 90% OSS for the 9mm (Marshal and Sandow 1992). While data are not available for the .22, this was sufficient to render Jim Brady permanently incapacitated.

[6] There is a large number of studies that evaluate the probability of accidental deaths by firearms. This said, the majority of the empirical evidence on both sides is sufficiently flawed as to render any projections useless. There is no doubt, however, that presence over absence of weapons increases the likelihood of shootings.

Resources such as teacher time, educational funding, administrative support and community/parent support are finite in nature. Every hour a teacher spends filling out student reports is one hour that cannot be used for developing lectures. A hand held metal detector costs about $200 and a walk through detector roughly $5000;[7] this means that we give up several textbooks for each hand-held unit or four state-of-the-art computers for each walk through detector. The benefits we give up each time we choose a particular security option are every bit as important as the security measure we choose. This is not to say that cost is the only measure we should use, only that as recourses become scarce, option cost becomes more closely linked with all the outcomes of the organization.

How This Project Is Laid Out

The data for this project come from several sources and cover the state of Texas. Some of the data used also include all states in the US. The U.S. Census bureau's 2000 Census CD provides demographic data. In May 2002, a survey was sent to all school district superintendents in the states of Texas and Florida. This survey included measures of violence, expenditures for programs targeting violence, interest groups, policies for reducing violence, and student body composition. The Department of Education in both Texas and Florida provided indicators of school violence for 1995 through the present. Finally, the Center for Disease Control provided copies of the 2000 School Health Policies and Programs Study and the 2000 Youth Risk Behavior Assessment Study. These data are merged on the school district level to provide a data set containing basic demographics, school characteristics, levels of violence and policies and attitudes at the organizational level.

[7] Prices are taken from a brief review of web sites offering similar products.

Environmental Roots of Violence evaluates the extent to which violence in schools is the product of external forces. If violence within the school is merely a function of the violence in the surrounding community, then there is no reason to expect the organization to effect change in the level of violence. This chapter begins by evaluating the extant theory of violence and derives a theoretically based model of violence in schools as a function of the surrounding community to assess the contribution of the external environment on organizational violence. This chapter asks the first of half of one of the basic questions in this manuscript; is it just the environment?

Organizational Control of Violence compares and evaluates the effect of organizational control mechanisms on the levels of violence in the organization as they pertain to schools. As the previous chapter identifies the portion of violence created by forces external to the organization, this chapter examines and identifies the portion of organizational violence that can be attributed to the organizational structure and control. This chapter specifically identifies which mechanisms are most relevant for organizational managers in the formulation of control structures for mediating violence in organizations.

The Policy Process of Violence in Schools provides the theoretical and historical background for the remainder of this project. It begins with an overview of the history of school violence in America. I then lay the theoretic groundwork necessary for later chapters. This chapter specifically addresses why and how schools fit into the policy process, and organizational and institutional theory necessary for applying the results of the following chapters to schools by theoretically adapting the Advocacy Coalitions Framework to provide expectations across subsystems and with aggregate data.

Additionally, this chapter spends some time hypothesizing about what the ACF should tell us about unstable systems. In the conclusion, I wrap the findings from the empirical work in the next chapter into an exploratory evaluation of how these expectations of the ACF fit with the current data and how and why this course should be expanded upon.

The Policy Subsystem: Players, Policies and Outcomes evaluates the policy system and outcomes of programs derived from case study literature. This chapter begins with evaluation of the decision-making stream leading to the adoption of policies, then evaluates the effect of these policies within the schools. Typically, governmental organizations evaluate the utility of micro-level programs in schools with macro-level indicators of student behavior. Many Department of Education reports claim that new efforts to reduce violence are successful based only on the national and state level trends in violence in schools. This chapter evaluates overall policy effects of violence control programs in a much more sophisticated manner to control for spuriousness that may be present in the typically parochial modeling offered by government agencies.

The *Conclusion* brings together the three areas covered in the empirical review of school violence. This chapter discusses the implications of the origins of violence policy, the outputs and outcomes of policies, and management techniques for dealing with violence in organizations. This chapter concludes with policy recommendations specific to schools and more broadly for organizations in general.

CHAPTER II

ENVIRONMENTAL ROOTS OF VIOLENCE:

TESTING THE COMMUNITY EFFECT

Schools are microcosms of the community in which they dwell, and a large part of school violence can be predicted from the violence within the community (Reiss and Roth 1993). That is because the factors that drive deviant behavior in a community are the same as those that drive this behavior in every subsystem of the community. Schools represent a sub-sample of the community population within a confined institution, and that sub-sample will be subject to the same pathologies present in the larger population. This is fortunate as there have been relatively few comprehensive studies of violence in schools (Laub and Lauritsen 2001). Unfortunately, we can not expect all violence within schools to be a direct product of the neighborhood in which the school is located. This is true for several reasons; first, school districts are not necessarily congruent with jurisdictional boundaries of cities, police districts or general zoning districts. Second, school bussing policies may mean that a significant portion of students in a given school are from areas away from the community which houses the school. Third, I expect schools will have an effect on the levels of violence within the school. This last difference between violence in schools and the surrounding community is possibly the most complex and certainly the most important because if schools do not have an effect, then neither will school policy nor this study. This chapter will expressly examine the influence of community violence on the school environment.

Why Schools Matter

Ecological systems theory (Lewin 1935, 1951; Bronfenbrenner 1977, 1979; Hobbs 1966; Garbarino 1982; Garbarino et al. 1992) states that there are four inseparable, interconnected systems that shape human development. It is the interaction between these systems, or contexts, which dictate type of adult the system produces. These systems are the microsystem, mesosystem, exosystem and the macrosystem. The microsystems are defined as those direct interactions between the child and the immediate environment (Astor, Pitner and Duncan 1996). More specifically, Bronfenbrenner (1979) defines a microsystem as, "a pattern of activities, roles and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics" (p.22). Astor, Pitner and Duncan (1996) List school, the neighborhood, the family and the community as typical microsystems in the development of youth. Thinking about microsystems as sets, we can define the mesosystem as the intersection of the microsystems. That is the "persons who participate actively in both settings, intermediate links in a social network, formal and informal communications among settings, and, again clearly in the phenomenological domain, the extent and nature of knowledge and attitudes existing in one setting about the other" (Bronfenbrenner 1979, p.25).

The exosystems are the settings that do not involve the child as an active participant, however, still host events that affect the setting containing the child. Some examples include school board decisions, events in a teacher's life, or changes in a parental microsystem (Astor, Pitner and Duncan 1996). Finally, the macrosystem "are the overall structural patterns in which a child lives and grows" (Astor, Pitner and

Duncan 1996, p.342). This includes the economy, laws and political events. Given this theory of development, it is easy to see how schools can impact violent behavior in children, as they are a microsystem in which children participate more than any other with the exception of the home.

Children develop in set microsystems. There is little that schools can do to affect the home or community in the short run; however, the school system itself can serve to temper the outcomes of home and community systems on the developing child. Laub and Lauritsen (2001) indicate that it is important to assess the impact of specific microsystems in respect to the other microsystems in the environment. In other words, to identify school specific contexts that either inhibit or exacerbate violence, we need to view school violence in respect to the additional contexts which play a role in the process.

Factors That Span Contexts

There are several factors that contribute to the likelihood that children will participate in violent acts. These can be broken down into two specific groups, physiological and environmental. Englander (2003) lists the physiological factors which lead to violence as, "perinatal problems, head injuries, and childhood disorders Attention-Deficit/ Hyperactivity Disorder[8]" (p.124).

Physiological Factors

In 1911, Cesare Lombroso put fourth the first modern biological theory of criminality. Since that time, researchers have established strong links between

[8] References deleted include: Perinatal problems (Kandel 1989; Kandel and Mednick 1991; Lewis et al. 1979; Mednick et al. 1971), head injuries (Lewis et al. 1986; Lewis et al 1979; Rosenbaum and Hoge 1989), and childhood disorders (Ellis 1991; Fergusson and Horwood 1995; Halperin and Newcorn 1997; Zagar et al. 1990; Jacobvitz and Sroufe 1987; Kandel and Mednick 1989; Zagar et al. 1989).

physiological and biological factors and behavioral disorders (Brennan et al 1995). First, there appears to be a strong link indicating that individuals may have a genetic propensity for antisocial behavior. Studies indicate that the single best predictor of a child's likelihood of criminal behavior is the father's criminal behavior (Robins 1966; See also: Brennan et al. 1995; Cloninger and Guze 1970; Glueck and Glueck 1974; McCord and McCord 1958; West and Farrington 1977). Similarly, studies of twin behavior seem to support this theory. Lange found that 77% pairwise concordance for criminality in monozygotic twins and only 12% pairwise concordance in dizygotic twins. Similar studies in eight other countries find similar results (Brennan et al. 1995; See also Christiansen 1977a; Christiansen 1977b; Dalgaard and Kringlen 1976). Additionally, more methodologically rigorous studies of twin behavior have not been able to reject the hypothesis of genetic propensity for criminal behavior in favor of a purely environmental model (Rowe 1983). Furthermore, several studies of adoptees indicate that the child's likelihood of antisocial behavior correlates to that of the biological father (Mednick et al. 1984; see also Bohman et al 1982; Cadoret et al. 1985; Cadoret 1987; Cloninger et al 1982; Crowe 1974; Sigvardsson et al. 1982).

Parents can have effects that are not solely attributable to hereditary factors. Perinatal and neurodevelopmental also play a role in the social development of a child. Research suggests that prematurity, low birth weight, neonatal seizures and pregnancy complications correlate with behavior disorders in children (Pasamanick et al. 1956; Mungas 1983); however, Brennan, Mednick and Volavka (1995), state that current research suggests that delivery complications appear to be more predictive than low birth weight or premature birth. Many scholars attribute the correlations between birth

complications to damage to the brain from anoxia and physical injury (Werner 1987). Additionally, a large body of work indicates that neurochemichal factors and some physiological factors may also increase an individual's likelihood of criminal behavior. Reduced levels of cerebrospinal fluid and poor autonomic reactions have also been linked to violent behavior (Brennan et al. 1995).

Environmental Factors

One of the most important environmental indicators of crime in general is the economy. Hale and Sabbagh (1991) find positive correlation between crime and the previous year's unemployment rate in Great Brittan. Additional studies have replicated this finding in the US (Russell 1994). Specific labor market indicators such as poverty have also been fruitful in predicting overall crime levels in the macro-environment (Freeman 1983; Chiricos 1987), and Land, McCall and Cohen (1990) find that poverty seems to covary with homicide. A vast body of literature also exists which replicates these findings on the individual level.[9] In addition to the economy, there are several other environmental factors related to crime that stem from the community.

Research indicates that high levels of population turnover reduce social delinquency (Freeman 1995; Shaw & McKay 1969). High levels of mobility have been associated with increased levels of violent crime (Block 1979; Sampson 1985, 1986; Smith and Jarjoura 1988; Taylor and Covington 1988). High levels of population heterogeneity alone and in conjunction with relative economic depravation have been shown to correlate with violent crime (Balkwell 1990; Kornhauser 1978). Population and population density both correlate with violent crime in neighborhoods (Roncek 1981; Scherman and Kobrin 1986; Sampson and Lauritsen 1994).

[9] See Freeman (1995) for a listing.

Community structure, or lack thereof, can also play a significant role in crime and violent crime in neighborhoods. Social capital has been demonstrated to be in integral part of community development (Putnam 1993) and is also found to be an important covariate with violent crime. Taylor, Gottfredson and Brower (1984) find that social ties to the community in both word and deed covary with levels of violent crime. Simcha-Fagan and Schwartz (1986) find a significant negative relationship between delinquency and organizational participation (Sampson 1995).

Controlling for Extra-Scholastic Covariates of Deviance

It is clear that the relationship between the environment and violent crime is complex. While this list is formidable, it is by no means an exhaustive list of the prior research done between the macro-environment and violent crime. Clearly these relationships can be modeled, however, any attempt to model each of these complex factors in a single model would be futile at best. Setting aside the problems with obtaining accurate measures of each of the above factors, the colinearity alone in any single model fitting all these covariates would wash away any useful information we might hope to gain from the exercise. To avoid this problem I begin this investigation of school violence by predicting the levels of violence in schools as a function of violence in the surrounding community. This technique offers two major benefits over trying to fit a model of school violence that accounts for these factors; accuracy and parsimony.

First, this approach will control for all sources of community violence, not merely those for which I can identify proxies. This is important because without a very strong model of community violence, there is no way to isolate the school effects on violent behavior. By using the actual data for community violent crime, I circumvent the

problem of identifying every source of community variation. This argument only stands if the school and community accurately reflect one another.

Measures of School Violence

Currently there are no nationally available data on crime or violent acts in schools. There exist some small subsets of national samples, and some survey samples of student reported violence, but there is no single archive of these data that include the entire population of the nation. There are, however, several states that have made an effort to collect data on violence and crimes in schools. Texas, Florida and North Carolina are among the many states that have begun to monitor violence in their school districts, and there is a national movement at the state level to standardize these data across all states. Examination of the data collection techniques and communication with several of the state agencies currently collecting data on school violence indicates that pooling these data would be ill advised. As there is no standard definition for many of the types of data, nor uniform reporting standards or procedures, any assumption of exchangeability between these state level measures would be heroic at best.

Given the state of data collection on violence in schools, I evaluate only Texas data. While other states have comparable, and in some cases better datasets, Texas provides the most diverse area with the greatest amount of observations and variance between observations. There are some drawbacks to utilizing the Texas school violence data. First, Texas blanks any counts of 5 or less to ensure anonymity of the perpetrators and victims. This means that for any count of five or less, they include a code that indicates occurrence but not frequency. Even at the district level, this means that there are a large number of truncated counts. Additionally, because the State has such fine

gradation in the measurement system, each individual classification of violence or crime suffers in relation to the gradation of the measure and "popularity" of the act. For instance, Texas tracks eight classifications of assault, but only one measure of tobacco possession. Because Assault is so finely measured, the counts have a staggeringly large proportion of blanked counts.

Texas School Violence

Texas tracks 38 indicators of crime and violence in schools. These include: Disruptive Behavior, Conduct Punishable as a Felony, Assault or Terroristic Threat, Controlled Substances/Drugs, Alcohol Violation, Abuse of Glue or Aerosol Paint, Public Lewdness/Indecent Exposure, Retaliation against District Employee, Off-Campus Title 5 Felony, Off-Campus non Title 5 Felony, Firearm Violation, Illegal Knife, Club, Prohibited Weapon, Aggravated Assault/Aggravated Sexual Assault, Arson, Murder/Attempted Murder, Indecency with a Child, Aggravated Kidnapping, Serious/Persistent Misconduct, Violated Local Code of Conduct, Criminal Mischief, Emergency Placement/Expulsion, Other Code of Conduct Reason, Hearing Office/Student with a Disability, Terroristic Threat, Assault-District Employee, Assault-Non-District Employee, Sexual Assault-District Employee, Sexual Assault-Non-District Employee, Tobacco, School-Related Gang Violence, False Alarm/False Report, Felony-Controlled Substance Violation, Felony-Alcohol Violation, and Other. Of these 38 indicators, eleven have no variation for the years 1998 to 2002. These include: Assault or Terroristic Threat, Club, Aggravated Assault/Aggravated Sexual Assault, Murder/Attempted Murder, Aggravated Kidnapping, Other Code of Conduct Reason, Hearing Office/Student with Disability, Sexual Assault-District Employee, False

Alarm/False Report, Felony Controlled Substance, and Felony Alcohol Violation. This does not mean that the events represented by these indicators have not occurred, just that the frequency was less than five for any given year. The descriptive statistics for the remaining 27 indicators appear in Table 2.1.

The descriptive statistics for the data available indicate that many of the indicators have relatively few occurrences. This lack of variability will make predicting these events problematic. Intuitively, it also seems that some of the more typical violations listed are rather low. For example, there are several organizations that have been established to discourage drinking at proms, athletic events and other school activities. In light of all the attention to underage drinking, it hardly seems possible that there were only 109 occurrences of alcohol in all Texas schools over the four year time represented in the data. It is apparent all of these indicators are underreported, and that many of the "less important" indicators may be discounted even more so than most. Bearing this in mind, I treat these data as indicators of underlying behaviors as opposed to true counts of events. Aside form this aforementioned lack of variance and underreporting, there are several other important problems that arise when dealing with multiple measures of related events. That is the interrelationships between the measures.

Table 2.1
Descriptive Statistics of School Violence

Indicator	Mean	Standard Deviation	Minimum Count	Maximum Count	Number of Observations
Disruptive Behavior	192.07	699.05	0	12036	4156
Conduct Punishable as a Felony	0.99	6.26	0	153	4156
Controlled Substance/Drugs	11.76	38.47	0	500	4156
Alcohol Violation	2.23	7.25	0	109	4156
Abuse of Glue or Aerosol Paint	0.16	1.51	0	23	4156
Public Lewdness/Indecent Exposure	0.54	6.01	0	180	4156
Retaliation Against a District Employee	0.16	1.32	0	24	4156
Off-Campus Title 5 Felony	0.36	2.72	0	44	4156
Off-Campus Non-Title 5 Felony	0.44	3.70	0	92	4156
Firearm Violation	0.08	0.98	0	19	4156
Illegal Knife	0.53	2.97	0	54	4156
Prohibited Weapon	0.51	5.52	0	165	4156
Arson	0.04	0.59	0	12	4156
Indecency with a Child	0.01	0.32	0	9	4156
Serious/Persistent Misconduct	4.74	21.38	0	402	4156
Violated Local Code of Conduct	450.28	1424.73	0	26446	4156
Criminal Mischief	2.25	12.96	0	235	4156
Emergency Placement/Expulsion	0.12	1.89	0	46	4156
Terroristic Threat	1.45	6.60	0	81	4156
Assault-District Employee	1.05	5.80	0	83	4156
Assault-Non District Employee	4.28	21.48	0	408	4156
Aggravated Assault-District Employee	0.02	0.36	0	6	4156
Aggravated Assault-Non District Employee	0.17	1.75	0	32	4156
Sexual Assault-Non District Employee	0.01	0.32	0	9	4156
Tobacco	5.27	19.27	0	226	4156
School-Related Gang Violence	0.63	4.70	0	78	4156
Other	1.51	16.61	0	386	4156

Many measures are simply aggregates of other measures. For instance, the count for prohibited weapons violations is strongly correlated with the measures for firearms violations, and possession of an illegal knife. Additionally, some measures have a completely different relationship with one another. As opposed to being similar

measures of the same behavior, there are those counts which represent substitutes for one another. Recall that these counts are official records of student acts of deviance within each school district, and the data represented by each count is also a reflection of the *definition* of the act implemented by the local school bureaucrat. Several of these indicators are strongly negatively correlated, representing one of two possibilities. For example, there is a strong negative correlation between "assault on a district employee" and "retaliation against a district employee." Either some of these deviant acts are negatively related or some districts are more likely to choose the lesser stringent classification than the more stringent classification of the act. As it hardly seems plausible that schools with high incidents of assault on a district employee would have reduced rates of retaliation against district employees, I assume that these are separate counts of equivalent acts. While this assumption seems reasonable, I eliminate all measures that appear to be or repeat counts. Additionally, I further reduce the number of indicators by eliminating any counts that are clearly labeled as "off-campus" events. This leaves ten remaining indicators of school violence for the Texas school districts.

Reducing the number of considered indicators, I have increased the reliability of the counts at hand; however, there are still problems with having ten indicators. Most importantly, these indicators are merely counts of behaviors. While the behaviors themselves are interesting, the underlying motives of these behaviors are what are more important. To assess these, I examine the remaining indicators using principal-component factor analysis to search for underlying commonalities in the data.

Identifying the Factors Driving Deviant Actions

Acts of violence in schools can sometimes seem to be random occurrences; however, this is far from fact. Many forms of deviance are driven by the same factors. Unfortunately, these factors are often not identifiable and nearly impossible to quantify. For example, a student who feels alienated may vandalize the school, have serious problems with misconduct of disruptive behavior, and in the worst case scenario commit heinous acts of violence. This does not mean that every case of vandalism or misconduct is the result of alienation, only that these multiple indicators may often be multiple signs of some latent condition. More troubling is the fact that there is no way to accurately count the number of students who feel alienated at any given time, and worse yet, there is no way to identify which alienated students may exhibit a deviant act as a result of this alienation. For policy to be effective in such cases, it is the underlying condition that must be identified and addressed. The most common technique for identifying and quantifying latent factors common with identifiable indicators is factor analysis. This technique identifies factors that represent correlation common across variables and generates scores for the factors for each observation. Before reducing the data using factor analysis, I first convert all the counts to rates per student by dividing each indicator by the district enrollment. This prevents correlations in the data caused by sheer size of the school. Next, I use factor analysis to identify which of these indicators are best suited together.

Factor analysis is a blanket term used to describe a family of data reduction techniques that all search for commonalities within data. These techniques use linear combinations of the observed data to create fewer indicators that summarize the

information presented in the observed data. By nature, factors created using these techniques are orthogonal, that is uncorrelated with one another. Theoretically, when dealing with multiple latent roots of violence, the assumption of orthogonal factors seems untenable. Factor analysis does allow for oblique rotation of factors after the initial extraction; however, this technique can be quite problematic to replicate. For this reason, I use factor analysis as an exploratory tool, grouping sets of factors in sets using the original factor solution. I then run one-shot factor reductions on the sets of factors I identify to generate the factor scores representing the levels of violence within schools. The first extracted factor, which I label Student Focused Violence (SFV) is based on six variables which all indicate deviant behavior within schools. The factor loadings for SFV appear in Table 2.2.

Table 2.2
Factor Loadings for Student Focused Violence

Variable	SFV Factor	Uniqueness
Illegal Knife	0.591	0.651
Prohibited Weapon	0.675	0.544
Criminal Mischief	0.513	0.737
Terroristic Threat	0.572	0.672
Gang Violence	0.384	0.853
Assault-Non-District Employee	0.685	0.530

Each of the counts used in creating this measure deal with types of violence or deviant acts that are predominantly focused on the school, or the students. The second extracted factor, which I label Teacher Focused Violence (TFV) is based on just two variables. The factor loadings for TFV appear in Table 2.3.

Table 2.3
Factor Loadings for Teacher Focused Violence

Variable	TFV Factor	Uniqueness
Assault- District Employee	0.764	0.416
Aggravated Assault-District Employee	0.764	0.416

Pearson Correlations	Assault	Ag. Assault
Assault- District Employee	1	
Aggravated Assault-District Employee	0.1686	1

The counts used here are of actions taken directly against teachers, principals and other district employees. Certainly acts focused on the authority figures in the organization are more severe in nature. This can easily be seen by the infrequency of occurrence (see table 2.4). These two measures, SFV and TFV, will be used as indicators of latent violence levels within the schools. Now, the interesting question is what causes these levels of violence against students and teachers? The first step in examining this question is to evaluate the outside environment, as theory clearly indicates that the environment should have some control over the violence in the schools.

Estimating Environmental Violence

The Texas Department of Public Safety provided incidence and arrest rates for seven different types of crimes for each police department in the State of Texas for the year 2000. These are: Murder, Rape, Robbery, Assault, Burglary, Larceny, and Auto Theft. As with the school counts, these indicators are divided by the general population

to ensure correlations are not a function of population. Descriptive statistics for these incident rates per 1000 population appear in Table 2.4[10].

Table 2.4
Descriptive Statistics for Community Violence

Variable	Mean	Standard Deviation	Minimum	Maximum
Murder	0.044	0.057	0.000	0.555
Rape	0.303	0.231	0.000	1.447
Robbery	0.521	0.651	0.000	3.539
Assault	2.497	1.610	0.000	10.082
Burglary	7.049	3.248	0.000	18.275
Larceny	20.063	12.461	0.000	51.073
Auto Theft	1.988	1.781	0.000	10.279

These data differ from the school district data in that these are actual counts and no values have been blanked, however, these data are similar in that these counts probably systematically underestimate the actual numbers of crime in the area. This problem is not unique to Texas data by any means. In fact, the crime literature is riddled with references to the discrepancies between official department counts, victimization studies and the true underlying crime levels in given areas of the country. The most readily accessible evidence of this trend in crime data can be found in the *Criminal Victimization in the United States* report by the US Bureau of Justice Statistics (2000). I apply factor analysis to these data to identify underlying patterns in the data to prevent problems with colinearity in the data. Initial analysis indicates that Murder and Rape rates do not fit well with the other indicators. The resulting factor loadings are listed in table 2.5. These data are now used to predict the level of violence in the schools focused on teachers and students.

[10] These data have been aggregated by school district, so the count reflects the number of school districts as opposed to the number of reporting departments.

Table 2.5
Factor Loadings for Community Violence

Variable	CVR	Uniqueness
Robbery	0.880	0.225
Assault	0.808	0.347
Burglary	0.851	0.275
Larceny	0.889	0.210
Auto Theft	0.897	0.196

Estimating the Effect of Community Violence

The community violence factor, murder rate and rape rate for the school communities are used to predict separately the levels of violence indicated by the student and teacher focused violence measures for the school districts. The results are presented in table 2.6.

Table 2.6
Regressions of School Violence with Community Violence

Dependent Variable:	**Student Focused Violence**			**Teacher Focused Violence**		
	Coefficient	**Standard Error**	**t**	**Coefficient**	**Standard Error**	**t**
Community Violence	0.246	0.017	14.6	0.109	0.018	6.2
Murder Rate	-0.123	0.270	-0.5	0.253	0.281	0.9
Rape Rate	-0.154	0.071	-2.2	-0.075	0.074	-1.0
Constant	0.046	0.029	1.6	0.009	0.030	0.3
Number of Observations		4128			4128	
F		81.18			15.91	
Probability of F		0			0	
Adjusted R-squared		0.0551			0.0107	
Root MSE		0.95483			0.99426	

Table 2.6 shows a weak relationship between the community violence index and the school violence indicators. This relationship is positive as expected; however, the relationship only explains five percent of the total variance. Worse yet, the community

violence indicator only explains about one percent of the violence focused on teachers. Additionally, murder and rape do not significantly covary with the two measures of violence in schools. These findings have three possible explanations: First, the measures can be completely incorrect and therefore produce no results. Second, because the community measures are based on total crime a community measure of youth crime may be in order. Finally, the violence in the community may just be a bad predictor of violence in schools.

Typically, the Department of Justice crime index is used to measure the level of crime for a given area. This index is an additive scale of the exact types of crimes I use in the current measure. Because the data do not include the same classifications as the typical crime index, I chose to use a factor score instead of making a partial index. Taken individually, none of the given indicators performs better than this measure. Additionally, if each type of violent act in schools is modeled individually against each individual type of community crime using count data models, the predictions are not better. This is most likely because crime statistics are not exact counts, but are actually measures. For instance, the majority of rape goes unreported. Comparisons between the uniform crime reports maintained by the FBI and every victimization survey shows huge discrepancies between the numbers of actual reports (see Kleck 1998). Given that the counts cannot be assumed to be actual counts, the numbers must be understood as a representation of the relative level of crime. Additionally, varying techniques of modeling the data do not improve fit nor predictive power.

The most plausible explanation remaining then is that the effects of the exosystem are limited in impact on violence within schools. This finding is only slightly

counterintuitive, as the basic premise of institutional research is that organizations matter. Noting that the exosystem has limited effect means that some microsystem must have influence on organizational violence. There are several obvious microsystems of interest in this question, however, this study deals with violence in organizations and the organizations of interest are schools. The question then becomes, what effect do schools have on the violence within them?

CHAPTER III

SCHOOL VIOLENCE AND THE ORGANIZATION

The proceeding chapter illuminates one important fact; violence in schools is *not* simply a reflection of the general community. This leaves the important question of *what does cause violence in schools.* The external environment, the exosystem, offers very limited explanatory power as to why schools experience levels of deviance. This finding is expected as many theories in public policy and organization theory would assume the individual units shape events that occur within their purview. For this reason it is important to evaluate how the microsystem, the organization, affects violence within its realm. While the previous chapter controls for many of the stable parameters and external events that are expected to effect policy decisions and outcomes, this chapter deals with the constraints and resources of subsystem actors. Specifically, this chapter investigates the relationship between attributes of the microsystem and violence. The first logical step in this endeavor is to identify what, organizationally, is different about schools that creates an environment where mild deviant behavior is the norm, and extreme acts or deviant behavior seem more and more likely?

Organizational Controls of Violence

In Merton's (1957) opening to *Bureaucratic Structure and Personality*, he calls for a formal system of interaction within organizations that can "facilitate the interaction of the occupants of offices despite their (possibly hostile) private attitudes toward one another." Lasswell (1936) also describes how, within a bureaucracy, "Specific procedural devices foster objectivity and restrain the quick passage of impulse into action." Further evidence of the ability of an organization to control the actions of its

members through a formal bureaucratic structure is provided by Long (1949) and his concept of organizational culture.

Organizational culture deals with the norms, rules, operating procedures, and hierarchical structure in place within an organization which causes the individual actors within the organization to behave in the same manner, and consequently to achieve similar results when asked to complete similar tasks. In this respect, the values, beliefs, and norms brought to the organization by the individual are marginalized, because the organization itself has set up an informal set of actions which is deemed appropriate and has incorporated those ideas into its formal structure. At this level, evidence of bureaucratic control over individual action is unquestionably achievable. The question which then becomes particularly relevant is what motivates individuals within an organization to achieve organizational goals?

Organizational Structure

The first factor in the control of organizational behavior is the level of organizational complexity present within the organization. Organizational complexity deals with the number of layers of hierarchy present within an organization. Complexity can occur both horizontally or vertically, but is almost always associated with the individual actor being insulated from the closest authority figure within that organization. There is no doubt that variation in organizational complexity can have an effect on individual behavior within an organization. One study, for example, finds that crimes committed against companies by employees was directly related to organizational complexity (Vaughan, 1983). The study concluded that as organizational complexity increased, the number of corporate crimes also increased. Based upon this finding, one

can conclude that organizations tend to lose touch with individual behavior as they become more and more complex. In relation to schools, this may mean that as schools grow larger students feel more alienated or removed from the authority structure of the school and are more likely to resort to forms of deviant behavior. It is important to note that size itself is not complexity. While larger will often translate to more complex, there are also mitigating factors that will not make this a perfectly linear relationship. To begin with, size is managed by organization. At the bottom of the school hierarchy, size is controlled by assigning students to classes and then controlling the size of the classes. Regulating the number of students to teachers means that the complexity of students can be managed by offering a reasonable span of control for students. At each level of the bureaucratic structure of schools, this concept of span of control tempers the effects of the actual school size. While there has been spirited debate about the effects of span of control in organizations (see Gulick 1937, Simon 1946), Meier and Bohte (2000) find negative correlation between size and span of control in school management in data on Texas school districts. This indicates that as schools grow, the span of control is likely to increase slightly. Therefore I expect that while spans of control will slow the increase in complexity created by size, it certainly will not nullify the effect. Aditionally, maintaining reasonable spans of control will require either more units or more levels of hierarchy within the school district. In this manner, school size will affect the complexity of the school district. Organizational complexity may also take the form of segregation within the school.

Segregation in schools is accomplished through many mechanisms, however, the most prevalent are through utilizing tracking and "special needs" programs[11]. Schools have used various instruments for grouping students for the better part of the last century (Tropea 1987). Unfortunately, these many forms of segregation have devastating effects on students. Students tracked into the remedial programs are often left unskilled and unprepared to compete in the workplace. More immediately though, school segregation reinforces student peer groups. That is students are isolated with limited contact to students not within the specified clustering imposed by the system. This in turn can lead to several key indicators of deviant behavior including reinforcing antisocial peer groups, academic failure and increased risk of peer rejection (Verlinden, Hersen and Thomas 2000).

Organizational Control

Organization theory has long been littered with the concepts of command and control. Earliest mentions of command and control are evidenced in the early works including Machiavelli's *The Prince* and Hobbes' *Leviathan*, but the notion becomes permanently imbedded in the literature through the work of Weber (1922) discussing the strengths of the hierarchal organization, Barnard (1938) and March and Simon (1958). Formally, command and control in organizations is most frequently conceptualized as principal-agent relationships. That is there is a principal who requires action and an agent who is charged with the execution. Principal-Agent theory has waned in favor since its heyday in the eighties and nineties[12]; however, the simple concepts of principals,

[11] For a detailed discussion of the detrimental effects of segregation systems within schools, see Tropea 1987, Meier, Stewart & England 1989.
[12] For description and application of Principal-Agent theory, see Wood and Waterman 1994; for historical discussion Moe 1984, Mitnick 1980.

agents and slack resources are still a fitting heuristic for understanding relationships of power in organizations.

The second factor affecting organizational control of individual behavior is linked to the amount of command and control, or formalization, found within the organization. This is often defined as the formal rules, standard operating procedures, and guidelines of an organization (Goh & Richards 1997). In studies of governmental bureaucracies, the higher the level of professionalization present within an organization, the more likely extreme formalization will produce conflict and alienation within said organization (Hall, 1996). While professionalization is of particular concern within schools as organizations, there may also be a link between this literature and school violence. The reason that professionals react negatively to excessive formalization is that is greatly restricts their autonomy and freedom. Likewise, as students in schools become older, and are seeking to "find themselves" socially, they are more likely to avoid the excessive formalization that is necessary to control behavior within large organizations.

The third factor deals with an organization's ability to motivate individuals to achieve organizational goals. Concerning this factor, it is important to look at Maslow's (1943) *Theory of Human Motivation.* While Maslow deals with a varied amount of factors which contribute to human motivation, once the lower order, physiological needs have been addressed, there are other needs, such as *Esteem Needs* and *The Need for Self-Actualization* which become increasingly important as people mature. *Esteem Needs* are based upon the belief that all people in our society have a "need or desire for a stable, firmly based, (usually) high evaluation of themselves, for self-respect, or self-esteem, and for the esteem of others" (Maslow, 1943). Similarly, the *Need for Self-Actualization*

deals with the realization that “a new discontent and restlessness will soon develop, unless the individual is doing what he is suited for” (Maslow, 1943). These needs are closely associated to a human being’s need to have some significant decision-making authority in what they are doing in their lives. The link between individual motivation and organizational goals is connected to the organization’s ability to instill a sense of self-esteem and self-actualization in the individual through the individual’s association with the organization. The highly structured curriculum and extremely centralized decision-making authority which is present in schools causes a neglect of these basic needs, and thereby a further alienation of the individual.

The final factor which is essential for organizational control over individual behavior deals with the depersonalization of the individual. In organizations it is key to control the social structure of the organization so that decisions are made with the organizational goal in mind, not the well-being of individuals within the organization. In this instance, if conflict arises, it does so between offices or departments, along guidelines and procedures which have been organizationally defined, thereby reducing the friction in these situations which might cause institutional reactions or violence. While this factor is especially useful in large governmental organizations, it is not possible to institutionalize, or depersonalize, all conflict within a school setting. More than in any other organization, schools deal with individuals, and more importantly individuals who are just beginning to gain a sense of themselves, and are not as confident in who they are as individuals. This creates a unique situation within schools as organizations which can lead to a further increase in alienation, and therefore an increase in the probability of violent action.

There are certainly institutional factors which can be employed by organizations to affect the behavior of individuals within those organizations, however, they may or may not have universal applicability across all organizations. While I demonstrate in the beginning of this paper that schools are ideal types of large governmental bureaucracies which are especially relevant to the study of organizations, there are also some organizational peculiarities which set schools apart from other organizations. The key components of this uniqueness are the age, maturity, and relative captivity of the individuals who make up the organization.

Modeling Organizational Covariates of Violence

Theoretically, it is clear that violence in the organization should be a function of organizational structure and control plus the effect of exogenous events. To examine the effect of organizational structure and control on violence, additional data are combined with the Texas Education Data used in the previous chapter. The additional data are the result of two separate surveys conducted by the Texas Educational Excellence Project, a subsidiary of the Project for Equity, Representation and Governance at Texas A&M University. The first survey measures correlates of crime and delinquency and the second deals with superintendent perceptions and control.

Dependent Variable

The dependent variable in this study is the level of violence in the schools free of the effect of the outside community. To construct this variable, I use the residuals from the regressions that predict violence in the previous chapter. I do this for two specific reasons. First, because the additional data used in this chapter are generated by survey, there are far fewer observations than in the base data which contains all school districts in

the state of Texas. While I could simply reuse the same dependent variables and include the measures for community violence, this would mean estimating the covariance between community violence and school violence using far fewer observations. Sacrificing the additional observations would require a tacit acceptance of covariance predictions that are inferior to what is possible given the data.

Second, this approach offers a more parsimonious and more conservative estimate of the impact of organizational structure on violence. This is more parsimonious because the resulting models will have fewer parameters. The approach is more conservative because I allocate all variance in the dependent variable subject to collinearity between the two systems, to the exosystem. I also save a few degrees of freedom in the reduced dataset by not having to estimate the parameters for the external environment.

Independent Variables - Structure

The first set of independent variables I examine in this study deal with the nature of the structure of the organization. These variables examine size, complexity, and systems that create divisions or unity within the student body. There is some contention as to whether or not size matters in organizations. Intuitively, size should affect many of the important aspects of an organization laid out by Gulick (1937). In his seminal work on organizational theory, Gulick addresses the importance of division of labor, span of control, central control and homogeneity. It would seem obvious that a larger organization would require more subdivisions both horizontally and vertically to maintain optimal span of control over the individuals within the organization. This theory is consistent with many studies in organizational theory, however, scholars are not unified in the belief that increases in organizational size will always result in greater

organizational complexity (See Rainey 1997 for a discussion of this). In the study of education, size has been demonstrated to be an important covariate for many organizational outputs. To control for organizational size in this study I include the average annual enrollment for the school district. Because the violence measure used as a dependent variable is created from violence rates within the school there should be no concern about spuriousness in any relationship.

Organizational complexity is not a function of size alone. Complexity is a function of specialty within an organization (Hall 1996). Many studies simply use a count of sub-units for a measure of complexity; however, education is not quite as clear. For instance, complexity in education can come from specific needs that are diverse across classes and not broken into specific classes. This problem is similar to the problem Perrow (1973) identifies when he discusses the dimensions of organizational technology. For the purpose of this study, I expand the definition of complexity to include any confounding factors that affect the organizational outputs. Specifically, I examine: Homogeneity, Sub-structuring, special needs, operational effectiveness, and organizational challenges.

Homogeneity is a complex issue in schools. Typically, homogeneity in organizations can be assessed in examining the array of outputs and the technical knowledge needed to complete the given outputs. In education, the anticipated outputs for most schools are nearly identical; however, the technology necessary may be vastly different. Many studies in education demonstrate that different populations need different technologies to succeed. For instance, a large body of literature supports the notion that representation in education has a positive effect on minority populations (See

Meier et al. 2005). Preliminary examination of these data show that no specific group (blacks, whites, or Hispanics) is responsible for creating more complexity than any other. Rather, it is the relative density of each of these groups that matter. That is, a school with a homogeneous population has less diversity in needs than a more heterogeneous one. To compensate for this type of organizational complexity, I include a herfindahl index to measure of diversity among students and a separate one among staff. This index ranges from zero to one with zero being a perfectly heterogeneous population and one being a perfectly homogeneous population. Additionally, I include measures of the percent of students from low-income homes and the percent of students in bilingual education.

To measure the subunits within the school, I use measures of the percent of students in each specialty program. As well as the percent in bilingual education mentioned above, I include measures for the percent of students in vocational education, gifted education and special education. I measure each of these specialty programs as separate programs *instead* of measuring them using a diversity measure because they do not each represent similar programs. That is, the organizational drain from one to the other is not equal, therefore, a diversity scale indicating that the school was entirely occupied by students in vocational education would not intuitively be the same as a an organizational scale measure indicating that the school is entirely occupied with special education programs. Additional organizational challenges addressed in this model include teacher turnover and student dropout.

Employee turnover in organizations often has detrimental effects[13]. Most important to the study of violence in organizations is the effect turnover has on policy implementation. Every individual requires training and socialization to be fully

[13] For a discussion of the effects of turnover in general, see Kellough and Seldon 1997.

productive within an organization. The more turnover an organization suffers, the less productive that organization will be. Given this, I expect that organizations with higher turnover will have higher levels of violence. I include a measure of the number of teachers who leave as a percent of the total number of teachers to control for this. Because these data are cross-sectional, it is impossible tell the direction of causality in this relationship. That is, a positive coefficient may indicate either the turnover creating organizational inefficiency or that employees tend to leave organizations with more violence. I assume this relationship is bi-directional; that both relationships exist. For this reason, I include this measure more for control than to differentiate absolute causality.

Dropout rates have been found to be strongly related to violence in schools[14]. Over and above the relationships between dropouts and violence, dropouts present specific challenges and represent a population that may require a alternative technologies for a school district. Students who dropout are strongly associated with special needs populations (Zweig et al. 2002). Dropout rates are correlated with minority, low income and bilingual populations. To measure the effect of dropouts on the organization I include a measure of the number of students who dropout of school as a percentage of the total population. This measure should not capture much more that the effect of the costs of student losses as many of the specific populations correlated with dropouts are included in the model.

The final indicators testing the effects of organizational structure on violence rates deal with organizational effectiveness. I hypothesize that organizations that are better at meeting goals will be better at reducing violence than those who are not as efficient at

meeting goals. As a measure of organizational efficiency in meeting goals, I include a measure of the percent of the students who pass the TASS test in the 10th grade. TASS is the basic skills test required for graduation given to all students and required by the state of Texas. In addition, I include a measure of revenue per pupil to control for organizational inputs

Independent Variables – Control

The idea of organizational control is a function of two main structures, overhead control and formalization. As mentioned previously, the first notion of control is that of overhead control. That is control comes from oversight of students by teachers or staff. To estimate the effects of overhead control as a check on school violence I include a teacher student ratio for the district. Control, however, is not always a function of overhead supervision[15]. There are several alternatives to principal-agent control in organizations. This includes socialization, institutional norms, and culture.

To evaluate the effect of socialization and culture on school violence, I include measures of the professionalism of the teachers. This is because formally educated teachers are steeped in the norms and cultures of a professional teaching profession and should hold similar values and beliefs regarding treatment of violence in schools. To measure professionalism, I include measures of average teacher salary, the percent of teachers with permits, the percent of teachers with advanced degrees and the percent of teachers with more than five years of experience. Teacher salary provides a rough measure of the quality of teachers in a district. The districts that provide higher salaries should, in theory, be able to attract the most qualified teachers. Teachers with permits are teachers who do not have a degree in teaching, but are allowed to teach by a waiver of the

[15] For a review of literature on informal control of bureaucracies, see Meier 1997

requirement by the state. These individuals *have not* been initiated into the teaching profession through the same channels as most teachers and are not as likely to hold the same values as those socialized in a formal education process. Teachers with advanced degrees measures those teachers with more formal training and in turn those more wed to the orthodoxy of teaching. Teachers with high levels of experience are those who have been in the profession for a significant period of time and should be more adept in the job. Also, these individuals are also those furthest from their exposure to the teaching orthodoxy taught in the education process.

Additionally, I examine the homogeneity and strength of the students' beliefs. I include a relative measure of student espirit de corps, and a relative measure of student clique groups within the district. These were measured by asking superintendents, "on a scale of 1 to 5 with 1 being few and 5 being many, how many specific clique groups are evident within your district." And asking, "on a scale of 1 to five with one being low and 5 being high, how would you rate the student espirit de corps of the students in your district." I include these measures because diversity in student beliefs will directly impact policy implementation in schools. The more homogeneous the student body, the more the student body will self-regulate, and in turn, the more easily policies can be implemented. Descriptive Statistics for all variables can be found in Table 3.1

Results

The dependent variable in this model are the residuals of a prior regression and therefore, require special attention when fit. Because the actual variances of the

dependent variable are explicitly known, the data are fit using weighted least squares.[16] Results are listed in table 3.2.

Table 3.1
Descriptive Statistics for Organizational Indicators

Variable	N	Mean	SD	Min	Max
Size					
Enrollment	1063	3942.979	11718.370	19	210179
Diversity					
Homogeneity of Student Body	1063	0.643	0.179	0.263	1
Homogeneity of Teachers	1063	0.858	0.146	0.363	1
% Students who are from Low Income Homes	1063	47.430	19.474	0	100
% Students in Bilingual Education	1063	5.876	8.941	0	79
Subunits					
% Students in Vocational Education	1063	5.876	8.941	0	79
% Students in Gifted Education	1063	7.810	4.014	0	50
% students in Special Education	1063	14.640	4.499	0	49
Additional Challenges					
Teacher Turnover Rate	1063	16.259	7.782	0	55
District Dropout Rate	1041	1.056	1.118	0	10
% of all Students that Pass the TASS Test	1063	80.905	9.189	43	100
% of Low Income Students Passing TASS	1053	73.849	10.544	38	100
Revenue per Pupil	1063	6635.71	2275.83	2755	40147
Control					
Teacher to Student Ratio	1063	12.804	2.445	4	29
Formalization					
Average Teacher Salary	1062	32721.61	2423.10	24626	44922
% Teachers with one or more Permits	1063	3.940	4.669	0	43
Teachers with less than 5 years Experience	1063	31.938	11.094	0	83
% Teachers with Advanced Degrees	1063	20.096	10.229	0	77
Student Preference Homogeneity					
Espirit de Corps	464	3.596	1.009	0	5
Relative Number of Cliques	464	2.689	1.28	0	5

[16] There are three possible solutions for heteroskedasticity in this model. The first is by using OLS with bootstrapped standard errors, the second is by using variance weighting conditional on a given right hand side variable, and the third is "whitewashing the model. As the asymptotic properties of the White's standard errors are not well known, I opted to employ the other two techniques. While the coefficient estimates for each were similar, the bootstrapped standard errors resulted in far more variables meeting the threshold of significance. I therefore opt for the more conservative results of the weighted least squares. Weighting is an inverse function of the school enrollment.

Overall, this model fits well, predicting 33 percent of the variation in the violence index. This figure alone is very significant insomuch as this reinforces the tenets of Ecological systems theory, indicating that the microsystem does in fact influence a substantial portion of the behavior within its prevue. More important to this work, this statistic indicates that not only do schools matter, but that they matter a great deal more than the external environment. Recall, not only was the r squared for the environment in the last chapter significantly smaller than this, but also, this model is being predicted on the residuals of the prior regression. This means that any collinear variance between the environment and the microsystem are being parceled to the environment.

Because the weighting is a function of enrollment and because the dependent variable has been purged of the community effects, it is no surprise to have no coefficient for the school enrollment.

Table 3.2
WLS Model of Violence Index

Dependent Variable: Violence Index	β	se	P	Beta
Size				
Enrollment	0.0000	0.0000	0.2130	0.0345
Diversity				
Homogeneity of Student Body	0.1594	0.3296	0.6290	0.0152
Homogeneity of Teachers	-2.0875	0.4682	0.0000	-0.1426
% Students who are from Low Income Homes	-0.0080	0.0039	0.0410	-0.0809
% Students in Bilingual Education	-0.0309	0.0078	0.0000	-0.1256
Subunits				
% Students in Vocational Education	0.0046	0.0038	0.2240	0.0361
% Students in Gifted Education	0.0436	0.0112	0.0000	0.1067
% students in Special Education	0.0237	0.0096	0.0140	0.0740
Additional Challenges				
Teacher Turnover Rate	0.0021	0.0055	0.7020	0.0119
District Dropout Rate	0.2779	0.0372	0.0000	0.2153
% of all Students that Pass the TASS Test	-0.0644	0.0128	0.0000	-0.3866
% of Low Income Students Passing TASS	0.0192	0.0098	0.0510	0.1350
Revenue per Pupil	0.0000	0.0000	0.2400	0.0431
Control				
Teacher to Student Ratio	-0.1536	0.0311	0.0000	-0.2028
Formalization				
Average Teacher Salary	-0.0002	0.0000	0.0000	-0.2494
% Teachers with one or more Permits	0.0450	0.0082	0.0000	0.1485
Teachers with less than 5 years Experience	-0.0351	0.0052	0.0000	-0.2836
% Teachers with Advanced Degrees	-0.0249	0.0046	0.0000	-0.1530
Student Preference Homogeneity				
Espirit de Corps	*	*	*	*
Relative Number of Cliques	*	*	*	*
Constant	13.8087	1.4891	0.0000	

N	1023
F	29.7
Prob > F	0
Adj R-squared	0.3358
Root MSE	1.4579

Measures of the school diversity are split. The measure for diversity in the student body shows no effect for differing populations within the school. Recall, this measure simply relates to the student body being of the same race and ethnicity, not a specific race or ethnicity. For example, of the highly homogeneous districts (those with a diversity measure greater than .8), 180 districts have a majority white students and 60 have a majority Hispanic. I expect that some of the variance this measure would pick up has been purged as a part of the community effects, however, it is very interesting to see that with all else constant, diversity has no perceived effect among the students.

Teacher homogeneity has a negative coefficient. This indicates that as the teachers become less diverse there is less violence in schools. The finding here is questionable, as much of the literature on teacher diversity in schools indicates that teacher diversity should have a positive effect on the school environment. Further investigation reveals that diversity is strongly correlated with the percent of teachers that are white (r = .71), and inversely correlated with the percent of students that are bilingual (r = -.44), the percent of students from low income homes (r = -.49), and enrollment (r = -.36). It would seem then that this measure is not picking up the effects of diversity, rather providing evidence that better schools in higher income areas have more white teachers. In fact, when an indicator of the percent of teachers that are white is included in the model, it takes on a negative coefficient of similar magnitude to that reported for teacher diversity. Additionally, none of the other coefficients change significantly. Apparently there are reduced incidents of violence or the reporting there of in smaller white upper-class schools over and above what would be expected by environmental change alone.

Oddly, the model reveals a significant negative coefficient for the percent of students who are from low income homes. Further investigation reveals that this indicator is strongly collinear with the percent of students who are in bilingual education (r = .55). Additionally, if the low income indicator is removed from the model, the percent of bilingual students changes to a significant relationship with a standard beta of -.17 ($p<.000$). Additionally, dropping the low income indicator does not significantly change the other coefficients in the model and improves the Adjusted R-square statistic. Taken as a whole, these findings seem to indicate that serving the needs of special populations in the form of ESL classes significantly decreases the level of violence within the school. This does not seem to be the case with special programs with a history of tracking students out of successful programs. Table 3.2 clearly indicates that vocational education and special education programs, tracking programs identified by Meier, Stewart, and England (1989), lead to increases in violence within schools. The important question here is Why bilingual programs and not vocational or special education?

The answer to this question is simple. In the current economy, special education and vocational education do not prepare our children for careers, while bilingual education allows students with a competitive disadvantage compete. Special education and vocational education lead to segregation from the general school population. Jenkins (1995) examined 754 middle school students and found that decreasing school commitment leads to increasing rates of school crime. Conversely, bilingual education connects otherwise segregated students with the rest of the student population.

Staff turnover results in increases in violence in schools. This indicator relates to the ability of the organization to implement policy as well as to the quality of teaching, and according to this model quality instruction does matter. The negative and remarkably strong standardized beta for the TASS pass rate indicates that where students achieve, violence diminishes. Strangely, there is a positive, significant coefficient on the low income pass rate. This coefficient is probably a correction to the dramatic effect of success in the presence of a confounding factor. It would seem that success is not as powerful for students handicapped by a low income background.

Control and professionalism all perform as expected. The model reveals that more teacher per student reduce the violence rate; however, the effect is not nearly as dramatic as some of the other organizational factors. It would seem that the lesson here is your can force compliance, but it is far better to inspire it! Also, it seems that young professional teachers offer better control than those with more experience.

The coefficient for teachers with permits is positive and significant. This may be that non-trained teachers are not as prepared at handling students or that simply in a state with a scarcity of teachers; districts with violence problems have problems attracting qualified educators. In reality I suspect the answer is somewhere in the middle. In the same vein, we see that teachers with advanced degrees are associated with reduced levels of violence and districts that pay more for their teachers have a reduced (albeit slight) violence. These three indicators are all related, but together have a good moral; better teachers lead to a better school environment.

Finally, the examination of homogeneity in the school districts bore no fruit. Both the measures of school spirit and relative number of social groups were not related

to the levels of violence in the schools. Because these measures were collected from a survey which had far fewer responses than the data for the other indicators (411 v. 1023) I dropped these indicators from the model. Interestingly, all the other measures behave similarly in the reduced sample. The reduced sample regression is displayed in table 3.3

Conclusion

Clearly, this chapter demonstrates that organizational structure and control do covary strongly with violence. As theory would suggest, Chapter II demonstrates a weak effect of environmental factors while this chapter plainly reveals the possibility of controlling violence though organizational means. In addition to confirming the applicability of an individual level theory in group level analysis, these simple theoretic findings hold complex information for practitioners.

This section highlights some very important facts about violence in schools. The first major fact is that violence in schools is more a product of schools than the environment. This finding is a double-edged sword for administrators. Clearly, violence in schools can not be ignored as a function of the environment because schools do have the means to temper the effects of the environment within the school. This means that administrators can and should try to implement means to combat violence. It also means that administrators do not have an excuse for violence!

Table 3.3
WLS Model of Violence Index (Reduced Sample)

Dependent Variable: Violence Index	β	se	P	Beta
Size				
Enrollment	0.0000	0.0001	0.8880	0.0054
Diversity				
Homogeneity of Student Body	0.5867	0.7443	0.4310	0.0402
Homogeneity of Teachers	-5.7218	0.9100	0.0000	-0.2828
% Students who are from Low Income Homes	-0.0201	0.0083	0.0160	-0.1480
% Students in Bilingual Education	-0.0425	0.0138	0.0020	-0.1362
Subunits				
% Students in Vocational Education	-0.0019	0.0077	0.8110	-0.0101
% Students in Gifted Education	0.1267	0.0247	0.0000	0.2043
% students in Special Education	0.0364	0.0182	0.0460	0.0900
Additional Challenges				
Teacher Turnover Rate	-0.0095	0.0140	0.4990	-0.0334
District Dropout Rate	0.4985	0.0672	0.0000	0.3262
% of all Students that Pass the TASS Test	-0.0421	0.0273	0.1230	-0.1866
% of Low Income Students Passing TASS	0.0052	0.0193	0.7870	0.0270
Revenue per Pupil	0.0000	0.0000	0.5980	-0.0297
Control				
Teacher to Student Ratio	-0.2614	0.0588	0.0000	-0.2666
Formalization				
Average Teacher Salary	-0.0002	0.0001	0.0000	-0.2306
% Teachers with one or more Permits	0.0764	0.0147	0.0000	0.2062
Teachers with less than 5 years Experience	-0.0538	0.0097	0.0000	-0.2882
% Teachers with Advanced Degrees	-0.0386	0.0081	0.0000	-0.1905
Student Preference Homogeneity				
Espirit de Corps	0.0683	0.0863	0.4290	0.0318
Relative Number of Cliques	0.0883	0.0828	0.2870	0.0410
Constant	19.5769	2.8113	0.0000	

N	411
F	23.37
Prob > F	0
Adj R-squared	0.5219
Root MSE	1.7108

As for how to combat violence, there are some clear and common sense organizational level approaches. First and foremost is student success. This chapter concurs with a large body of literature which suggests that if you give the student a future you will improve the present. Here we see that where students succeed, violence is

reduced. Additionally, specific programs which help students succeed (i.e.- bilingual education) also help reduce the levels of violence. Better teachers, and more programs geared to student success reduce violence, however segregation does not.

Education literature has been reporting the negative impact of tracking in schools for several decades. Clear evidence exists which shows that special education and vocational education programs are not on par with their counterparts internationally and do not prepare students for a career after school. This lack of preparation leads many children to despair, alternative illicit career paths and disciplinary problems. Here we see that these programs hurt not only the individual student, but the student body as a whole.

Considering these findings, the next important question is to focus on policies that deal with violence. Specifically, we need to address resources directed at reducing violence in the schools as a matter of efficiency, because we clearly see that student success is a strong medicine for violence. The major question then becomes should we focus anti-violence policies on violence or student success?

CHAPTER IV

THE POLICY PROCESS OF VIOLENCE IN SCHOOLS

Before evaluating policy dealing with violence in schools, it is important to first understand the processes that drive the generation and application of policy in schools. This section begins by describing the policy environment, players and constraints within the educational arena. I then review major theories of public policy to generate a cogent theoretical frame to guide the analysis in the following chapter.

Sources of Policy in Education

Schools occupy a unique niche in government. On the micro-level, individual schools are accountable to school boards. In most states, non-partisan boards direct the operations of schools via a superintendent for these independent political entities. On the macro-level, the environment of school policy is far more complex. National, state and local governments all have some role in school policy. This means that any national change in school policy will have to be reviewed and implemented by the federal government, the governments of all fifty states, and the governing bodies of the more than 16,525 local school boards (DoED 2002). Obviously, this high degree of complexity in the educational policy system will lead to a great deal of ambiguity in the implementation of policy on the school level, and ambiguity will tend to make the policy subsystem unstable. How unstable is the policy environment of organizational violence in Schools? To answer this question we must first understand the environment of school policy.

Federal Government in Education

Most are familiar with federal interventions in the educational system. Federal control of school policy is normally centered in the Department of Education (DoED). During its one hundred thirty-five year history,[17] the Department of Education has seen roughly seventy public laws passed directly effecting elementary and secondary education in the United States (DoED 2002). While this seems like a sizable number, the majority of these laws deal with specific policy areas of national interest.[18] Similarly, the

[17] Congress founded the U.S. Office of Education in 1867. In 1979, The Department of Education was established as a cabinet-level department. Technically, the Dept. of Education is only twenty-three years old, however, the institutional memory should date back to the founding office.

[18] These areas include people with **disabilities** [Education of Mentally Retarded Children Act (Public Law 85-926), Captioned Films for the Deaf Act (Public Law 85-905), National Technical Institute for the Deaf Act (Public Law 89-36), Model Secondary School for the Deaf Act (Public Law 89-694), Elementary and Secondary Education Amendments of 1968 (Public Law 90-247), Handicapped Children's Early Education Assistance Act (Public Law 90-538), Education for All Handicapped Children Act (Public Law 94-142), Education of the Handicapped Act Amendments of 1983 (Public Law 98-199), Handicapped Children's Protection Act of 1986 (Public Law 99-372), Children with Disabilities Temporary Care Reauthorization Act of 1989 (Public Law 101-127), Americans with Disabilities Act of 1990 (Public Law 101-336), Improving America's Schools Act (Public Law 103-382), Developmental Disabilities Assistance and Bill of Rights Act Amendments of 1996 (Public Law 104-1834), Individuals with Disabilities Education Act Amendments of 1997 (Public Law 105-17), Assistive Technology Act of 1998 (Public Law 105-394)], **low income issues** [Amendment to Lanham Act of 1940 (Public Law 815 and Public Law 874, 81st Congress, in 1950), School Lunch Indemnity Plan (Public Law 78-129), National School Lunch Act (Public Law 79-396), Financial Assistance for Local Educational Agencies Affected by Federal Activities (Public Law 81-815 and Public Law 81-874), (Public Law 815), (Public Law 874), School Milk Program Act (Public Law 83-597), Migration and Refugee Assistance Act of 1962 (Public Law 87-510), Elementary and Secondary Education Act of 1965 (Public Law 89-10), School Assistance in Disaster Areas Act (Public Law 89-313), Elementary and Secondary Education Amendments of 1968 (Public Law 90-247), Indochina Migration and Refugee Assistance Act of 1975 (Public Law 94-23), Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988 (Public Law 100-297), Stewart B. McKinney Homeless Assistance Amendments Act of 1988 (Public Law 100-628), Childhood Education and Development Act of 1989 (Part of Public Law 101-239), Improving America's Schools Act (Public Law 103-382), Human Rights, Refugee, and Other Foreign Relations Provisions Act of 1996 (Public Law 104-319)], **vocational education** [Smith-Hughes Act of 1917, Vocational Rehabilitation Act of 1918, Smith-Bankhead Act of 1920 George-Barden Act (Public Law 80-402), National Defense Education Act (Public Law 85-864), Vocational Education Act of 1963 (Part of Public Law 88-210), Economic Opportunity Act of 1964 (Public Law 88-452), Vocational Education Amendments of 1968 (Public Law 90-576), Youth Employment and Demonstration Projects Act of 1977 (Public Law 95-93), Carl D. Perkins Vocational Education Act (Public Law 98-524), National Service Trust Act (Public Law 103-82), School-To-Work Opportunities Act of 1994 (Public Law 103-239), Carl D. Perkins Vocational and Applied Technology Education Amendments of 1998 (Public Law 105-332)], and **safety** [Civil Rights Act of 1964 (Public Law 88-352), Drug Abuse Education Act of 1970 (Public Law 91-527), Drug Abuse Office and Treatment Act of 1972 (Public Law 92-255), Juvenile Justice and Delinquency Prevention Act of 1974 (Public Law 93-415), Drug-Free Schools and Communities Act of 1986 (Part of Public Law 99-570), Student Right-To-Know and Campus Security Act (Public Law 101-542), School Dropout Prevention and Basic Skills

Federal courts have only been involved in education in areas of national interest such as the separation of church and state, desegregation and bilingual education. This is not to say that the federal role in elementary and secondary is trivial. In 2000, more than ten federal departments contributed funds to schools. Of those agencies, the Department of Education alone spent over 16 billion dollars on elementary and secondary education at the local level (DoED 2002). Additionally, the Department of Education also sponsors a variety of state level educational organizations. For example, the Department of Education sponsors fourteen agencies that deal with education in Texas in addition to support for the primary educational system. This illustrates that not only are their multiple federal agencies influencing state education, but also multiple paths for individual federal agencies to influence education. While this system of multiple links between the federal and state systems create opportunities for federal influence, the United States educational system should not be mistaken for one with strong central control. Unlike most other developed nations, the national government of the United States does not operate a national school system (Cochran & Malone 1995). Instead, the majority of the responsibility for elementary and secondary education in the US is located on the state and local level. (Dye 1988; Tyack & Cuban 1995).

State and Local Control of Schools

Every state has a department of education. Typically, these state level agencies are regulatory and distributive in nature. They provide funds, and above that they enforce state and federal level legislation dealing with education. This includes tracking, testing

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Improvement Act of 1990 (Public Law 101-600), Safe Schools Act of 1994 (Part of Public Law 103-227), Educational Research, Development, Dissemination, and Improvement Act of 1994 (Part of Public Law 103-227), Improving America's Schools Act (Public Law 103-382)]. Other issue areas include Native American issues, Focus programs for math, sciences and the arts, and budget issues (DoED 2000).

and certification. Additionally, states generate guidelines for curriculum, rules for charter schools, home schooling, and equivalency testing. In education policy, the state role is greater than that of the Federal government, but not the chief arena for policy generation or implementation. Real policy occurs mainly at the local level.

Hess (1999) Identifies several actors in the policy making process in large urban school districts. Chief among these actors are the school board and the superintendent. Following in order of importance, come teachers unions, civic/business leaders, community/PTA/parents, local politicians, administrators, the courts and finally the state (61). It is clear that Education policy as a domain has multiple streams of policy initiation, and that among the many streams of policy, the local are the most influential.

Policy Theories and School Violence

Evaluating policy typically entails quantifying outputs or outcomes and relating them to the policy inputs contributed by the system; however, to understand the policy system we have to have insight as to how the relations between the system inputs operate on the system outputs and outcomes. It follows then, that the quality of the information derived from any analysis is directly linked to the completeness of the theory guiding the investigation.

Baumgartner and Jones (1991, 1993, 1998) argue that policy subsystems are a dynamic process that is best represented as a punctuated equilibrium (PE). That is there is some constant incremental change process that normally occurs that may be punctuated from time to time by an external event. The authors describe this system as one that is a rational incremental process, much like that described by Lindblom (1959) and Wildavsky (1964), except from time to time new mobilizations can cause the rational

system to explode. This simple approach provides an eloquent picture of the policy process over time and seems to describe well the phenomenon of violence in schools. There has always been some level of violence, but the events at Columbine marked a "punctuation" in the process and have led to rapid change within a short timeframe. Unfortunately, the Punctuated Equilibrium theory offers little insight into what occurs within the organization, and therefore merely describes the phenomenon as opposed to offering insight at the organizational level.

A similar theory to PE is the Advocacy Coalitions Framework (ACF), proposed by Sabatier and Jenkins-Smith (1993). The authors offer a comprehensive system of policy analysis that evaluates policy as a subsystem, expanding on the traditional idea of a subsystem offered by Easton (1965). The ACF is a powerful theoretic tool for the analysis of policy, which expects that over time the policy process will be a stable environment with routine change being a function of the intersection of beliefs among coalitions competing for control. There are two major differences between the ACF and PE theories of the policy process. These are focus and relevance of the actors involved.

Punctuated Equilibrium deals primarily with information surrounding the punctuation. PE is based in budget theory and contributes mostly by helping identify when a punctuation is or will occur and not what is going on within the policy subsystem during the punctuation. This lack of information is due primarily to the lack of focus on the periods of stability. Conversely, the ACF provides little insight to the periods of punctuation as the theory deals with the interactions of coalitions during periods of stability. Punctuations are treated as external to the system and their effects are not

considered important to the long term evaluation. This divergence accounts for the difference in the treatment of the actors in the system.

PE treats actors as incremental decision makers, guided in action by bounded rationality.[19] This system relegates routine change to a simple power struggle. On the other hand, the ACF focuses on routine change and attributes change during periods of stability to interactions in the belief systems of the dominant coalitions in the policy subsystem. According to Sabatier and Jenkins-Smith, policy outcomes are a function of external system events, resources, and subsystem actors. External system events are responsible for punctuations, while the interaction of beliefs govern the periods of stability. Unfortunately, punctuations are inherently more interesting than periods of stability. Therefore, to gain insight to the policy process during times of punctuation, the ACF must be extended to leverage these periods.

The ACF in Practice

The ACF holds that change is the function of two causal factors, interaction of coalition beliefs and exogenous shocks, where the interaction of beliefs generate incremental change and exogenous shocks produce radical change. The strength of this approach is that it offers insight to the interactions of the individuals over a three-tiered belief system. The ACF holds that coalitions are comprised of relevant actors, be they governmental, interest group, or private individuals. These individuals are bound

[19] See Simon (1957, 1977, 1983, 1985)

together by policy-oriented beliefs. Most fundamental of all beliefs are the Deep Core beliefs, followed by Policy Core beliefs, then Secondary Aspect beliefs. Table 4.1 re-creates the original description of belief systems provided by Sabatier and Jenkins-Smith (1993). Interactions between coalitions during times of relative stability deal mainly with policy learning in reference to coalition beliefs. These interactions are governed by a set of hypotheses which due to the overwhelming amount of research to date, I treat as axioms. These are listed in table 4.2.

Assuming assumption in hypothesis 5 dealing with significant perturbations external to the system is correct, we would expect that during times of relative environmental stability, the variance in policy outputs and outcomes should be low; however, this would logically assume that during times of environmental instability, punctuations, we should see a large amount of variance in the policy outputs. Additionally, punctuations lead to additional problems to the conventional ACF approach.

Table 4.1
ACF Belief System

	Deep Core Beliefs	Policy Core Beliefs	Secondary Aspect
Defining Characteristics	Fundamental normative and ontological axioms	Fundamental policy positions concerning the basic strategies for achieving normative axioms of deep core	Instrumental decisions and information searches necessary to implement policy core
Scope	Part of basic personal philosophy. Applies to all policy areas	Applies to policy area of interest (and perhaps a few more)	Specific to policy area/subsystem of interest
Susceptibility to change	Very difficult; akin to a religions conversion	Difficult, but can occur if experience reveals serious anomalies	Moderately easy; this is the topic of most administrative and even legislative policy policymaking
Illustrative components	1. The Nature of Man: i. Inherently evil vs. socially redeemable ii. Part of nature vs. dominion over nature iii. Narrow egotists vs. contractarians 2. relative priority of various ultimate values: freedom, security, power, knowledge, health, love, beauty, etc 3. Basic criteria of distributive justice: Whose welfare counts? Relative weights of self, primary groups, all people, future generations, nonhuman beings, etc.	1. Proper scope of governmental vs. market activity 2. Proper distribution of authority among various units of government 3. Identification of social groups whose welfare is most critical 4. Orientation on substantive policy conflicts, e.g., environmental protection vs. economic development 5. Magnitude of perceived threat to those values 6. Basic choices concerning policy instruments, e.g., coercion vs. inducements vs. persuasion 7. Desirability of participation by various segments of society: i. Public vs. elite participation ii. Experts vs. elected officials 8. Ability of society to solve problems in this policy area i. Zero sum competition vs. potential for mutual accommodation ii. Technological optimism vs. pessimism	1. Most decisions concerning administrative rules, budgetary allocations, disposition of cases, statutory interpretation, and even statutory revision 2. Information concerning program performance, the seriousness of the problems, etc.

Reproduced from Sabatier and Jenkins-Smith (1993)

Table 4.2
ACF Hypotheses

Hypotheses Concerning Coalitions

Hypothesis 1: On major controversies within a policy subsystem when policy core beliefs are in dispute, the lineup of allies and opponents tends to be rather stable over periods of a decade or so.

Hypothesis 2: Actors within and advocacy coalition will show substantial consensus on issues pertaining to the policy core, although less so on secondary aspects.

Hypothesis 3: An actor (or coalition) will give up secondary aspects of his or her belief system before acknowledging weaknesses in the policy core.

Hypotheses Concerning Policy Change

Hypothesis 4: The policy core attributes of a governmental program in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that instituted the program remains in power within that jurisdiction—except when the change is imposed by a hierarchically superior jurisdiction.

Hypothesis 5: The policy core attributes of a governmental action program are unlikely to be changed in the absence of significant perturbations external to the system, i.e., changes in socio-economic conditions, public opinion, system-wide governing coalitions, or policy outputs from other systems

Hypotheses Concerning Learning *across* Coalitions

Hypothesis 6: Policy-oriented learning across belief systems is most likely when there is an intermediate level of informed conflict between the two coalitions. This requires that

a) Each have the technical resources to engage in such a debate.

b) The conflict be between secondary aspects of one belief system and core elements of the other or, alternatively, between important secondary aspects of the two belief systems.

Hypothesis 7: Problems for which accepted quantitative data and theory exist are more conducive to policy-oriented learning across belief systems than those in which data and theory are generally qualitative, quite subjective, or altogether lacking.

Hypothesis 8: Problems involving natural systems are more conducive to policy-oriented learning across belief systems than those involving purely social or political systems because, in the former, many of the critical variables are not themselves active strategists and because experimentation is more feasible.

Hypothesis 9 Policy-oriented learning across belief systems is most likely when there exists a forum that is

a) Prestigious enough to force professionals form different coalitions to participate and

b) Dominated by professional norms

Reproduced from Sabatier and Jenkins-Smith (1999)

Many times existing data are not sufficient to address external shocks. This is the case with school violence where there were no states collecting these data before the need arose. Even now that data do exist, they are not uniform across states and even districts

in come cases. Recall also, that the system of interest here is a social system, a type of system Sabatier and Jenkins-Smith (1993) already caution is less likely to afford coalitional learning. Simply, in periods of external shock, we should expect little coalitional learning within a policy subsystem. It follows then, that during periods of stability as exemplified in hypotheses 4 and 5 change in system outputs will be governed by cross-coalitional learning; however, in times of exogenous shock change will be a function of the hypotheses governing coalitions themselves.

Given the evidence supporting the notion of cross-coalitional learning driving change in times of stability (see Sabatier 2004), the remaining question becomes what happens when change is a function of something other than cross-coalitional learning. Cross-coalitional learning takes place when coalitions achieve consensus across core beliefs and are able to offer information effecting secondary aspects of the opposing belief systems. When core beliefs are not reasonably uniform within coalitions, change will be a function of stabilizing core beliefs within the coalitions in effort to resolve perplexity in the linkages between beliefs and policies. Perplexity in how policies relate to beliefs is a major source of uncertainty in systems dealing with exogenous shock; however, this is not the only source of uncertainty in the educational setting.

Uncertainty in the Subsystem

Superintendents are the primary source of policy in schools (Hess 1999). Couple this fact with the fact that the average tenure of a superintendent is about five years, and we see that continuity is difficult to maintain in schools (Tyack & Cuban 1996). Not only does the high turnover in superintendents create problems alone, but also superintendents are usually hired for the sole purpose of change (Hess 1999). This means

that by design, there is little continuity in school policy. When we talk about violence in schools, are we really dealing with an exogenous shock to an otherwise stable system, or are we actually dealing with an exogenous shock to an already unstable system? Typically, the ACF sees change as an incremental process bounded by the limitations imposed by the core beliefs of the participating coalitions. Additionally, it suggests that exogenous shocks remove these systemic barriers to dynamic change, but does not offer guidance for these times. Fortunately, several competing theories may be of assistance in understanding the subsystem changes during such times. Cohen, March and Olsen (1972) describe a system likening the policy system to a garbage can. Kingdon (1994) refined this theory into what is commonly referred to as Multiple-Streams theory.

Kingdon states that policy change is a function of "policy streams" that meet during a window of opportunity. He posits that all policy makers are limited by bounded rationality. There is no perfect information, and decision makers are always required to make choices in some degree of uncertainty. Kingdon posits that policy decisions are the result of streams of policies, problems and politics meeting in an arena of uncertainty. In short, he suggests that policy is the result of a chaotic environment where policies are matched to problems in an environment riddled with ambiguity created by fluid participation, problematic preferences, and unclear technology (Zhariadis 1999). What Kingdon terms ambiguity relates well to what Lindblom (1979) refers to as "understanding."

Lindblom proposes a two-fold theory of decision-making that divides types based on the level of understanding of the decision makers. He posits where understanding is high, we see rational-comprehensive decision-making. Where understanding is low,

decision makers default to disjointed decision-making (Hayes 1992). This is where decision-making shifts from an incremental shift from the status-quo to a system characterized by: 1) limiting options to only familiar policies, 2) the intertwining of policy goals and values with empirical assessment, 3) greater preoccupation with the ills to be prevented rather than the positives to be gained, 4) a sequence of trials, errors, and retrials, 5) limited analysis and, 6) fragmentation of analysis to partisan participants to ensure all parties get a piece of the pie Weiss and Woodhouse 1992). This difference in the decision-making system is important because it identifies what should theoretically happen in the case of uncertainty and therefore should lend insight to the change in the policy subsystem in the event of exogenous shock. As in most typologies, Lindblom limits what is in reality a continuum to a dichotomous categorization. I conceive this concept as a range and term levels of understanding as uncertainty.

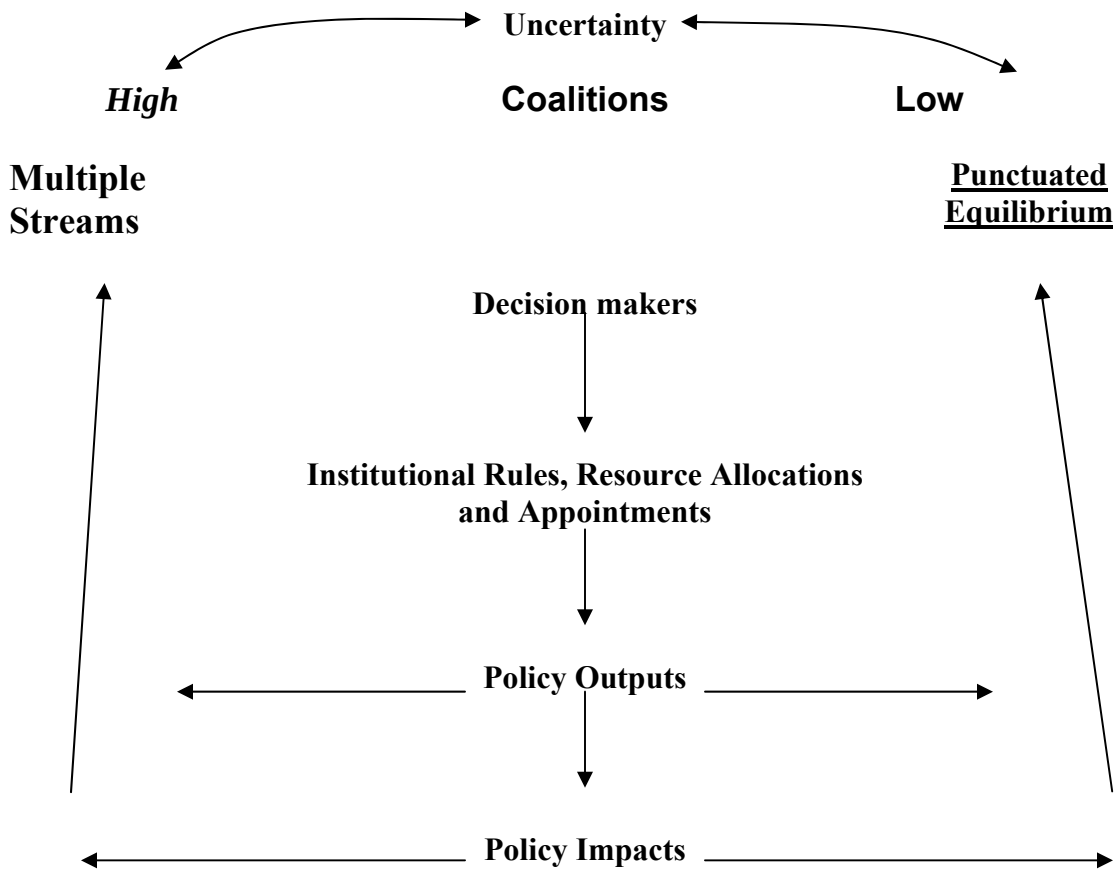
Typically, the Advocacy Coalitions Framework, Multiple Streams, and Punctuated Equilibrium are understood as radically different systems, however, they do complement each other well. The following section describes the policy system as an ACF system that has a decision-making component that varies within a range bounded by a multiple streams/disjointed Incrementalism framework and a punctuated equilibrium/rational-comprehensive framework.

Adapting ACF for High Levels of Systemic Uncertainty

Sabatier and Jenkins-Smith (1993) offer a comprehensive system of policy analysis that evaluates policy as a subsystem, expanding on the traditional idea of a subsystem offered by Easton (1965). ACF does not “fit” the evaluation of violence in schools, as the process has not had time to settle into a stable system.

Figure 4.1

Modified ACF Policy Subsystem



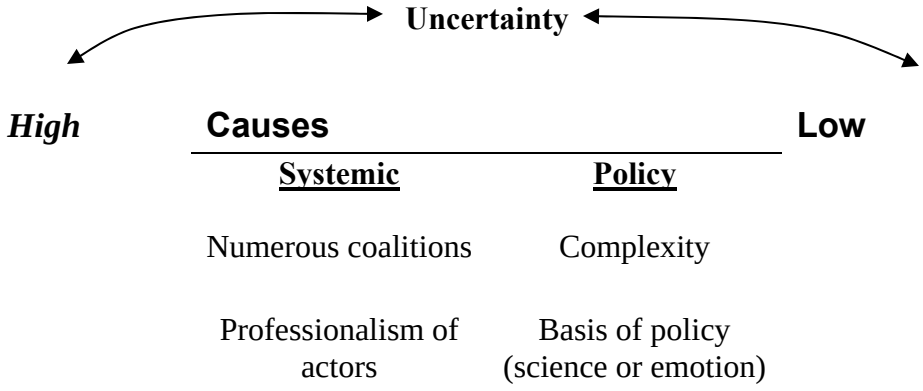
Traditionally, the violence policy system in schools would be characterized by other theories; however, neither Multiple Streams Theory nor Punctuated Equilibrium Theory seems to fit exactly. The best representation lies somewhere in between the two. Multiple Streams and Punctuated Equilibrium Theory are not two choices from a bimodal pool, rather opposing views representing the ends of a continuum in respect to ambiguity in the decision making phase of the policy process. Using this conceptualization of the policy process, we can refine the ACF to more closely represent the policy system evident in school violence.

Figure 4.1 illustrates the modified ACF Subsystem to reflect the role of uncertainty in the structure. Sabatier and Jenkins-Smith (1993) state that a policy sub-system is the arrangement of like coalitions within a given interest area. They indicate that policy is generated by coalitions of actors in response to stable system parameters and external events, and that policy produces outputs and impacts that feed back into the sub-system. Additionally, they assert that constraints and resources of the subsystem actors moderate this system. Unfortunately, when there is a high degree of uncertainty, it becomes difficult for coalitions to match their core beliefs to policy responses. Without the strong bonds between beliefs and polices, the tempering effect of coalition attachment to beliefs dissipates from the system and the process becomes erratic. Given this, the correct specification for this theory is not to model the decision-making system like Punctuated Equilibrium Theory, but to allow this structure to vary in accordance to the amount of uncertainty in the system. In systems with low amounts of uncertainty, the decision making process will look more like the reasoned and systematic rational-comprehensive model of punctuated equilibrium theory. In the event of high uncertainty, the reasoned system becomes irrational, more of a reactionary system. The higher the level of uncertainty, the more the decision making process mimics the visceral disjointed-incrementalism of a multiple streams system. Systemic rationality dissipates, and policy choices tend to be quick-fixes for immediate problems.

Additional Sources of Inherent Uncertainty

As noted earlier, several structural components of the subsystem can create uncertainty. These include short tenure of key policy makers, multiple interest groups, and the professionalism of the actors.

Figure 4.2
The Role of Uncertainty in the Decision Making Process



There are several policy specific factors that also add to the relative amount of uncertainty in a policy subsystem, and they are all linked to a specific type of policy area; that is morality politics. Typically, the application of ACF to policy domains does not necessitate consideration of policy typologies in the most traditional sense. That is, studies using ACF do not need to spend time discussing the impacts of distributive or regulatory policy, as the traditional typologies do not identify aspects of policy that are relevant to the Advocacy Coalitions Framework. One subdivision of policy studies that does, however, is morality policy.

Mooney (2000) characterizes morality policy as, "first and foremost, by debate over first principles (3)." He states,

> A policy is classified as a morality policy based on the *perceptions* of the actors involved and the terms of debate among them… it is these perceptions of issues that we should be concerned with when defining this policy category. If at least one advocacy coalition involved in the debate defines the issue as threatening one of its core values, its first principles, we have morality policy (4).

Issue areas that fall into the arena of morality policy include: Drugs (Meier 1994; 2001), Physician-assisted suicide (Glick & Hutchinson 2000), Censorship (Brisbin 2000), sexual preference (Haider-Markel 2000), Abortion (Goggin & Mooney 2000; Meier & McFarlane 2001), pornography (Smith 2001), but are not limited to what is listed here.[20] What is most important about morality politics is the effect it has on a policy subsystem.

Meier (1994) indicates that morality politics will have three important effects on the policy subsystem-- high salience, low cost of participation for citizens, and a high cost of opposition. Gormley (1986; See also Meier 2000; Eisner et al. 1999) indicates that high salience issues normally draw the attention of principals. High salience in regulatory policy makes enforcement easier and attracts multiple types of groups to the issue. Additionally, given that "policy makers are more responsive to citizen values on morality policy than on non-morality policy (Mooney 2000, 9; See also Mooney & Lee 1995, 2000; Haider-Markel and Meier 1996; Fairbanks 1977)," greater numbers of interest groups will fetter the policy system. High salience alone is not enough to draw large numbers of participants to an issue subsystem. For average citizens to participate, they must be able to enter the arena as a player and not merely an interested spectator. Gormley (1986) differentiates regulatory policy by salience and issue complexity.

[20] For a review of morality policy literature, see Studlar 2000, Meier 2000, and Mooney 2000.

Morality policy is an issue area where the substance of policy discussion is always focused on values, morays, or belief systems. This means that the complexity of the issue discussion is simple enough to not exclude the vast majority of the populace. This is not to say that the issue itself is not complex. For example, abortion is a highly salient issue nationally. The debate over abortion is framed as either a pro-life or a pro-choice issue as opposed to a scientific discussion as to the origins of life, health effects of abortion, differing fetal status during gestation cycle, national economic impact, or even policy failure of sex education (Norrander & Wilcox 2000; Daynes & Tatalovich 1998). By framing the issue as one over basic beliefs as opposed to scientific technicalities, the policy discussion becomes simple and requires less technical information for participants.

Finally, Meier (1994) indicates that the cost of opposition to morality policy will be high. More specifically, the cost for opposing a moral position with anything other than a moral position will be high. Morality policy is policy where, unlike traditional policy, there is little variance in positions across an issue area. Typically, actors in the morality policy arena have very similar views. In the case of abortion policy, most interested individuals are either in support of abortion or in opposition to it based on the individuals' first principles. In the case of abortion, there is a bimodal distribution of preferences with very little variance around each mode. Areas of morality politics can be unipolar, bipolar, or possibly even multipolar. Violence in schools is a policy domain where there is only one dominant moral stance. Very few groups or individuals have stood up for the moral correctness of murder in organizations, especially in schools. Drunk driving is similar in the respect that is a unipolar morality issue.

School violence is certainly a new issue area, despite the prevalence throughout history. Additionally, much of the debate surrounding violence in schools has been visceral in nature as opposed to technical discussions. Clearly, violence in schools fits Meier's definition of morality policy, and given this fact, we should expect the following:

- Coalition actors will tend to be less professional than participants in less salient topic areas (e.g. – the environment, national security).
- Coalitions will all be anchored on a single pole of the debate. That is no groups will take the pro-violence stance.
    - Subsequently, Coalitions will find it more difficult to differentiate themselves from competing coalitions on the core belief level.
- Because the participants will be non-professionals operating in a subjective issue area, the opposite of the ACF expectations in hypotheses 6 through 9, we should expect that the policy domain of violence in schools will be a complex arena rife with uncertainty.

As I have alluded to repeatedly, this uncertainty will effect the decision making process insomuch as it will temper policy efficacy, applicability, and the relative linkages between policy core beliefs and policy adoption.

Implications for This Study

This chapter has characterized the policy environment of school violence. I expect all coalitional groups to hold similar preferences based on the nature of the policy area. Additionally, I expect that in spite of the homogeneous preferences for outcomes, the systemic ambiguity will produce an eclectic preference for policies. Additionally, I expect that policy preference addressing school violence will not be a function of actual

levels of violence within the schools, but contextual based on the policy demands of the influence of the various coalitions in the subsystem. In all, I expect that when evaluated coalitions are evaluated at the aggregate level, what will be present will more resemble Eaton's original subsystems, where the major difference between each district's system is not a function of systemic individuality, merely ambiguity in the system.

While I this may seem orthogonal to many contemporary approaches to policy analysis, I contend that the majority of advances over the past decade have been at the margins. Contemporary policy theory is driven by a focus on new innovation as opposed to uniting theory into a parsimonious overarching theory. All the while a few scholars have continued to focus on what was right. That is we had it right with subsystems and many new theoretic innovations merely polish what we already have. For instance, McCool (1998) suggests that there is little difference between the mutations of systems theory and offers a uniting framework for regulatory policy. In a complex investigation of policy, Worsham (2004) finds subsystems alive and well in government.

I contend that the progress from subsystems theory to current network analysis is not innovation in policy theory, but merely refinement of theory driven by time and exponentially greater computational technology. We should view a policy system not as a specific case of these systems, but as a point on a continuum of these systems located by the openness to the environment and systemic ambiguity. In chapter V, I illustrate this point using violence in schools as a specific case.

CHAPTER V

THE POLICY SUBSYSTEM: PLAYERS, POLICIES AND OUTCOMES

While chapters II and III focused on the role of the organization in school violence, they leave out a very interesting and important part of the puzzle. That is how can violence be changed and what are the costs of those changes. Contemporary policy theory does not offer much directly pertinent to violence in schools, but as the last chapter demonstrates, there are some combinations of current theory that may lend insight. This chapter deals specifically with how the policy subsystem affects violence in schools and it also addresses the negative externalities of those policies.

In the preceding chapter, I make several assumptions about the policy system. Recall that while the ACF is a fruitful framework for addressing subsystem dynamics of a policy area, currently it is not well suited for addressing violence in schools. Foremost is the problem of school violence being a relatively new subject. While I argue that this has been a persistent problem, its salience did not reach national prominence until the events in Columbine Colorado in the mid 90's. While this does represent an available time frame of more than ten years, there are not data available for the majority of this period. Hence, the issue area is a difficult fit for the ACF as it is currently applied. Secondarily, the ACF is not an aggregate theory. That is to say, while the assumptions of the ACF are thought to be generalizable across policy subsystems, the theory has rarely been tested in aggregate level data.

Assessing the Subsystem

One of the major barriers to evaluating the ACF in aggregate level data is that the ACF deals with individuals as coalition members. Because Sabatier and Jenkins-Smith

(1993) expect coalitions to be groups of individuals bound by similar preferences, comparison across subsystems becomes highly problematic due to an inability to exactly match coalitions across subsystems (e.g. Zafonte and Sabatier 2003). While the detail provided by assessing individuals within the system is a necessity to understand the learning dynamics within the subsystem, this limits the scope to which this theory can be tested. To alleviate this problem, I link individuals to representative interest groups within the subsystem. On face, this may seem an inappropriate operationalization for coalition members under the ACF; however, I believe there is merit to this approach. First, Sabatier and Jenkins-Smith expect that coalition membership is based upon common core beliefs. While many large, fragmented interest groups may have a disjunction between organizational goals and member beliefs, this problem is not as severe in smaller interest groups. Additionally, many of the interest groups identified here draw membership based on core beliefs at the local level.

For instance, The National Rifle Association has been repeatedly criticized by its membership for espousing values not concurrent with the membership. Most notably among these criticisms was the cancellation of lifetime membership by the 41st president of the United States. Conversely, smaller, less fragmented interest groups often have more consistent values with the membership (Dean 1983).

A second reason why interest groups are more reasonable identifier in the case of school violence is due to the nature of the policy area. As I indicate in Chapter II, school violence is an issue of morality. And as Meier (1994) points out, "morality policy is made to order for citizen participation in the policy process (p.7)." This is because issues of morality policy are presented in a simple manner and are highly salient. In these cases,

the policy beliefs of the member are more likely to be consistent with those of the interest group. Additionally, Wood and Waterman (1994) indicate that in policy areas of high salience, public opinion has a far greater impact on policy implementation.

Assuming that because the issue of school violence is a local issue with national prominence and because policy is most often adopted and implemented on the local level, the first step in assessing the policy subsystem of school violence is to identify how this problem reaches the agenda and how policy is formulated.

Agenda Setting and Formulation

There are many different incarnations of subsystems theory in public policy. Consistent among these are the basic ideas of four stages of the policy process. While it is generally accepted that these stages are distinct only by artificial construct, I will use these stages to help conceptualize the process. Generally, the policy process can be broken down into the agenda setting, formulation, implementation, and evaluation stages (Skok 1995). In Chapter IV, I argue that the agenda setting and formulation phases vary from a rational process to a random process depending on the level of uncertainty in the system. In an environment of low uncertainty, I expect that we would have a stable, rational system where the dominant coalition would dominate the agenda setting and formulation processes. In the presence of high ambiguity created by external shock, I expect we should see no dominant coalitions in this process. While in chapter IV, I suggest that this is similar to the Kingdon (1984) model, I must clarify a few points.

First, Kingdon would expect no relation between the agenda setting and policy formulation. This is because multiple streams theory expects the problem and policy streams to be independent (see Robinson and Eller 2005). I expect that we should see

continuity between the problems and solutions, but that there will be no continuity across policy subsystems as to which groups set the agenda. In other words, I expect to see problems and solutions resulting from the same interest group sources within subsystems, however, I expect to see no continuity in sources across subsystems. This is consistent with the expectations of the disjointed-incremental model which expects to see fragmentation of the analytical framework to many partisan participants in policy making (Weiss and Woodhouse 1992, 256). And with the expectations of morality policy that anticipates greater public participation of less professional actors.

H1: In subsystems of high uncertainty agenda setting in the policy subsystem will be dominated by non-professionals

The 2002 survey of school superintendents collected data as to the source of problems, and solutions for specific challenges addressing the school district. I asked superintendents to identify which groups have actively brought problems to their attention and which groups have actively brought specific proposals to their attention. The responses to each led to seven categories of groups. These include: Individual teachers, individual parents, teacher organizations, parent organizations, local government officials, state government officials, and federal government officials.

Streams in the Policy System

To assess the first half of this proposition, I use logit analysis to model the probability that a group actively proposed a policy alternative as a function of the groups that identified a violence problem. The results are displayed in table 5.1a-g.

Table 5.1a
Logit Solution Model for Individual Teacher

Solution offered by	Individual teacher	β	s.e.	P
Problem identified by	**Individual teacher**	9.8328	2.9289	**0.00**
	Teacher Organization	0.6339	0.3080	0.35
	Individual Parent	0.8156	0.2186	0.45
	Parent Organization	1.8844	0.8946	0.18
	Local Official	1.2367	0.3442	0.45
	State Official	0.5045	0.3457	0.32
	Federal Official	1.7915	1.3675	0.45
	Log likelihood	-236.5454		
	N	464.0000		
	LR χ2(7)	95.1400		
	P	0.0000		

Table 5.1b
Logit Solution Model for Teacher Organization

Solution offered by	Teacher Organization	Odds Ratio	s.e.	P
Problem identified by	Individual teacher	0.5870	0.2911	0.28
	Teacher Organization	9.2010	4.8616	**0.00**
	Individual Parent	2.2390	1.1889	0.13
	Parent Organization	3.5226	2.0121	0.03
	Local Official	0.5905	0.3135	0.32
	State Official	1.2310	1.2827	0.84
	Federal Official	2.2614	2.5805	0.48
	Log likelihood	-89.4015		
	N	464.0000		
	LR χ2(7)	38.1600		
	P	0.0000		

Table 5.1c
Logit Solution Model for Individual Parent

Solution offered by	Individual Parent	Odds Ratio	s.e.	P
Problem identified by	Individual teacher	1.2557	0.3666	0.44
	Teacher Organization	1.3188	0.6189	0.56
	Individual Parent	7.3974	2.7863	**0.00**
	Parent Organization	1.8954	0.8500	0.15
	Local Official	1.4343	0.4172	0.22
	State Official	0.7348	0.5426	0.68
	Federal Official	0.8184	0.7065	0.82
	Log likelihood	-197.9876		
	N	464.0000		
	LR $\chi 2(7)$	68.9500		
	P	0.0000		

Table 5.1d
Logit Solution Model for Parent Organization

Solution offered by	Parent Organization	Odds Ratio	s.e.	P
Problem identified by	**Individual teacher**	0.3625	0.1703	**0.03**
	Teacher Organization	1.3426	0.8438	0.64
	Individual Parent	3.6441	1.9970	**0.02**
	Parent Organization	11.4295	5.9378	**0.00**
	Local Official	1.5490	0.7253	0.35
	State Official	1.2134	1.3026	0.86
	Federal Official	0.4708	0.6146	0.56
	Log likelihood	-90.5745		
	N	464.0000		
	LR $\chi 2(7)$	41.1900		
	P	0.0000		

Table 5.1e
Logit Solution Model for Local Official

Solution offered by	Local Official	Odds Ratio	s.e.	P
Problem identified by	Individual teacher	0.9910	0.3124	0.98
	Teacher Organization	1.0141	0.5419	0.98
	Individual Parent	1.6482	0.5348	0.12
	Parent Organization	1.1965	0.6262	0.73
	Local Official	14.2631	4.2527	**0.00**
	State Official	0.1857	0.1389	**0.02**
	Federal Official	7.8754	6.1989	**0.01**
	Log likelihood	-180.5918		
	N	464.0000		
	LR $\chi 2(7)$	122.4700		
	P	0.0000		

Table 5.1f
Logit Solution Model for State Official

Solution offered by	State Official	Odds Ratio	s.e.	P
Problem identified by	Individual teacher	1.1638	0.4089	0.67
	Teacher Organization	1.5647	0.8303	0.40
	Individual Parent	2.0330	0.7520	0.06
	Parent Organization	1.5371	0.8236	0.42
	Local Official	0.9814	0.3486	0.96
	State Official	6.3139	3.6800	**0.00**
	Federal Official	2.1250	1.3492	0.24
	Log likelihood	-158.8792		
	N	464.0000		
	LR $\chi 2(7)$	50.8600		
	P	0.0000		

Table 5.1g
Logit Solution Model for Federal Official

Solution offered by	Federal Official	Odds Ratio	s.e.	P
Problem identified by	Individual teacher	1.5700	0.9879	0.47
	Teacher Organization	2.9719	2.2751	0.16
	Individual Parent	2.5487	1.6317	0.14
	Parent Organization	0.1876	0.1960	0.11
	Local Official	1.7695	0.9544	0.29
	State Official	1.6537	1.7001	0.63
	Federal Official	31.0539	31.9890	**0.00**
	Log likelihood	-69.64		
	N	462.00		
	LR χ2(7)	66.45		
	P	0.00		

The tables overwhelmingly indicate that if a given group identifies a problem that the same group also proposes a policy to deal with that problem. In every model, the highest odds favor the group offering the solution. In a few cases, other groups seem to have a bit of an influence; however, these data clearly indicate that the policy stream and problem stream are not independent. These findings strongly suggest that the policy system is clearly not as chaotic as Kingdon (1984) would suggest. In the policy subsystem of school violence, policies and problems come from the same source. It could be that Kingdon was half right in that policy entrepreneurs operate in the individual coalitions to match problems and policy solutions; however, this is not the only case. It could also be that although problems are coming with solutions, the final policy solutions adopted are not distinctively the same as those that accompanied the original problem. Problem and policy sources are not the only important issue in the agenda setting and policy formulation system, as all sources are not always equal in the eyes of the sovereign

decision maker. The next important issue is which group is most effective in setting the agenda of the superintendent.

Setting the Agenda

As I indicate in chapter IV, the policy environment for school superintendents is very complex and includes players from local, state and federal levels. To understand how policies are chosen, I model superintendent concern about school violence as a function of the groups identifying problems of violence in the school district. To start, I first measure superintendent concern about school violence.

I measure superintendent concern about school violence in several ways. First, I asked school superintendents specific questions about their commitment to violence programs. Responses were on a standard five-point Likert scale with 1 representing the most negative response and 5 representing the most positive response. Specifically, I asked:

- "I consider school violence an important problem in my school"
- "Many people are interested in reducing the potential for violence at my school"
- "I have seen patterns of violence change in my school over the last ten years"
- "I have seen patterns of violence change in my school over the last five years"
- "Our district has drastically increased the resources for reducing violence in the past ten years"
- "Our district has drastically increased resources for reducing violence in the past five years"
- "Our district needs to dedicate more resources to reducing violence"

I applied principal components analysis to create a single measure of attention to violence in the district. Not surprisingly, all the questions loaded on the same factor, and only one resulting factor had an eigenvalue greater than one. Factor loadings and scoring coefficients can be found in tables 5.2 and 5.3.

Table 5.2

Factor Scores for Superintendent Concern about School Violence Variable

Factor	Eigenvalue	Difference	Proportion	Cumulative
1	4.16887	3.54373	0.8756	0.8756
2	0.62513	0.35220	0.01313	1.0069
3	0.27293	0.29334	0.0573	1.0642
4	-0.02040	0.06033	-0.0043	1.0599
5	-0.08074	0.01021	-0.0170	1.0429
6	-0.09094	0.02254	-0.0191	1.0238
7	-0.11348		-0.0238	1.0000

Table 5.3
Factor Loadings for Superintendent Focus

Variable	1	Uniqueness
Important	0.59852	0.64177
Interested	0.66891	0.55256
Patterns Ten	0.85634	0.26668
Patterns Five	0.84635	0.28370
Resources Ten	0.83643	0.30039
Resources Five	0.83625	0.30069
Reduction Need	0.71739	0.48535

The first and most obvious criticism of all variables is whether the underlying concept is really what I intend to test. Measuring institutional goals is a problematic endeavor at best. Surveys rarely capture exactly what researchers intend, however, this

survey has a number of advantages. It targets superintendent opinions of institutional actions. While I expect that the measures themselves will not be perfectly accurate in relation to the questions asked, I do expect that they will capture what the superintendent *believes* represents the current state of his/her district. Superintendents have two possible motivations in answering these questions. First they can provide the "correct" answer. This is the answer that reflects how they perceive violence to be affecting the district. The second possibility is that they are providing what they believe is the correct answer. That is they are answering what "should" be the correct answer based on their beliefs of the current socio-political environment. In either event, the respondents are providing an answer about beliefs and not actual events. In sorting out the underlying covariation, I intend to capture the organizational "focus" on the problem as perceived by superintendent. To test this I ran correlations between this measure of attention to violence and specific counts of violent acts within the school districts. This provided no support for the assumption that the measure simply captures institutional violence.

Using this measure of superintendent attention to violence as a dependent variable, I use OLS to assess the impact of the seven different sources of problems on the superintendent's impression of the violence problem in schools. Because the superintendent will also be influenced by actual occurrences of violence as well as lobbying efforts in the policy subsystem, I include the measure of school violence created in chapter III as a control for school violence. The results are displayed in table 5.4.

Table 5.4
Regression of Superintendent Attention to Violence

Dependent Variable: Superintendent Attention to Violence

Variable	β	s.e.	P
Individual teacher	0.3645	0.0973	**0.00**
Teacher Organization	0.0391	0.1926	0.84
Individual Parent	0.5411	0.0992	**0.00**
Parent Organization	0.2789	0.1909	0.15
Local Official	0.2392	0.1138	**0.04**
State Official	-0.1027	0.2332	0.66
Federal Official	0.3268	0.2643	0.22
Violence Index	-0.0572	0.0380	0.13
Constant	-0.5702	0.0727	0.00
N	413.00		
F(8, 404)	13.10		
Prob > F	0.00		
R Squared	0.21		
Root MSE	0.87		

Table 5.4 clearly demonstrates that superintendent impression of school violence problems are generated by local sources. This is demonstrated by the positive significant coefficients for the individual teachers, parents and local officials. This is consistent with Hess' (1999) assertion that local sources are most important in the influence of school policy, however note entirely expected as recent legislation at the federal level indicates that there should be greater federal input. Also, it is interesting that the agenda is not dominated by fixed coalitions as the ACF would suspect, but that the measure of individuals is far more influential than that of groups of parents or teachers. Interestingly but not unexpectedly, the violence measure is insignificant in this model. While at face this may seem surprising, recall that the violence measure is a relative measure across

school districts. It is not surprising then to see evidence that the superintendent belief about a problem is related to the efforts of subsystem members rather than in reference to other subsystems.[21] These findings could also indicate another interesting phenomenon in the policy subsystem.

When evaluating the policy and problem streams, it seems that there are unified sources of both. Interestingly though, while it would seem that the superintendent is more influenced by individual parents and teachers, all seven of the sources participate in the system. It would seem that perhaps what is happening in the policy system is that while many are jockeying for control of the subsystem, the system itself is narrowing down in scope to just a few select groups or players. Here we see that while participation is open to all, only a few are heard. Those few tend to be individual parents and teachers as opposed to organized groups. This may well indicate a move to stability as described by Sabatier and Jenkins-Smith (1993).

Obviously, the participants in this system resemble what would be expected from a disjointed-incremental system, but are not quite as chaotic as what we would expect in a true "garbage can." Are there other similarities in this system and my expectations? The second assumption of a disjointed-incremental system is greater analytical preoccupation with the ills to be remedied rather than positive goals to be sought. Additionally, this system expects limited empirical analysis that explores only some, not all, of the possible consequences of policy alternatives. Based on this I expect:

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[21] The finding of no significance between my violence measure and superintendent perception about violence may lead to the faulty conclusion that the measure for violence is simply flawed. This is not the case. As well as the lack of correlation with my measure, there is no correlation between the superintendent perception and any measure of violence. Correlations between violence counts and rates based on the data reported by the school district are all uncorrelated with the superintendent perception measure.

H2: Systems with higher degrees of uncertainty will show evidence of high negative externalities from policy decisions.

While I can not test this hypothesis directly, I do anticipate that there are some obvious goals of organizations that will suffer from the implementation of new goal focused programs is systems of uncertainty.

Implementation and Evaluation

Much research has addressed the effect of violence policies on the rate of violence (e.g. NBER 2004), and reports of school violence have been gradually reducing for over ten years. For example, The National Center for Education Statistics' indicators of School Crime and Safety 2000 reports the number of serious violent crimes and theft has declined since 1992 (Kaufman et al. 2000). Additionally, a survey of students who have been victims of school crime and violence showed a decrease from ten percent to eight percent since 1995 (Canady, Stark and Naumann 2001; USDOJ 2002). A study by the US Department of Education found that "overall school crime, including theft, rape, sexual assault, robbery, aggravated assault, and simple assault declined by one third between 1992 and 1998 (2002)." Violence in schools is on the decline; and while I certainly do not argue that there is some acceptable level, only that the reductions in violence in schools *must* have opportunity costs. That is, for the relative increase in safety, schools must be giving up some other benefit.

Schools and the Goals They Face

Safety is certainly an important goal for schools, but there are many other goals that schools must pursue daily. Education, social skills, and character building are all

outputs I expect from schools. Tyack and Cuban (1995) identify several different and contradictory consumer expectations of schools. They list:

> To socialize them to be obedient, yet to teach them to be critical thinkers;
> to pass on the best academic knowledge that the past has to offer, yet also teach marketable and practical skills;
> to cultivate cooperation, yet to teach students to compete with one another in school and later in life;
> to stress basic skills but also encourage creativity and higher-order thinking;
> to focus on the academic 'basics' but also provide a wide range of choice in courses (43).

This list offers just conflicts in education goals. Schools also face greater and equally conflicting goals. Schools are expected to have both educational and athletic excellence (Meier et al. 2005). Schools are expected to produce active members for the community and remain non-partisan in approach. Schools are expected to instill moral values and keep church and state separate. We expect schools to pursue all these goals simultaneously; however, organizations with diverging goals seldom succeed at this task (Downs 1967; Rainey 1997). There is ample evidence to support the notion that schools, just like all other organizations, are likely to make tradeoffs between goals (Hess 1999; Meier et al. 2004; Tyack and Cuban 1995).

The Opportunity Costs of Violence Prevention in Schools

School violence has several obvious effects. Students who are afraid are more likely to be preoccupied in the classroom, and will lack the focus to concentrate on schoolwork. Worse still, a student who does not survive the school day obviously cannot receive a diploma. Less obvious is the effect that violence prevention programs have on school performance. Paradoxically, violence prevention programs can actually make some students feel less secure. Students may feel that if there is a need for a security

policy, then there must be a security problem in the school. Additionally, locker searches and officers in the hallways may seem like an intrusive breach of personal privacy.

While these concerns may seem a relatively small price to pay for security, there are larger costs to the security programs. Many programs require extensive staff training, taking time away from educators that might otherwise spent on teaching preparation. Security programs also drain fiscal resources. Training programs, new staff, metal detectors and new security doors all place a financial burden on schools. Many of these expenditures are not one-time costs either. Additional staff requires budgeted funds for every year as well as provisions for benefits and retirement. Training programs require annual training, expenses for provisions and in some cases travel. All these costs limit the resources that can be dedicated to a school's primary mission. I hypothesize that increased resource expenditures for violence prevention will negatively influence the academic performance of all students, and that minority students will feel a disproportionately greater impact of the program effects.

Modeling the Outcomes of School Violence Policy

I model a stock education production function against various indicators of school performance using a robust regression (weighted least squares). This is an iterative form of linear regression that progressively down-weights the impact of outliers (Pindyck and Rubinfeld 1998).[22] This is done to identify the typical effect of increased attention to school violence on competing school goals. Robust standard errors with traditional OLS is the most common approach to this situation; however, I use the weighted least squares

[22] The robust regression estimates are produced in Stata/SE. This particular program first generates estimates using the Huber weights (Huber 1964), then uses biweights (Beaton and Tukey 1974; Stata Corp. 2001).

for several reasons. First and foremost, weighted least squares produce a different coefficient based on the reduced impact of outliers. In other words, this procedure better estimates the median cases in comparison to traditional OLS. This is important because robust standard errors adjust the standard error of the estimate *without* adjusting the estimate of the slope, so the correction improves the reliability of the hypothesis test, but does not adjust the estimate.

Dependent Variables

As previously noted, schools have multiple goals. The most obvious goals of schools all have to do with scholastic performance. I include three measures of academic performance for the districts; average SAT scores, average ACT scores and Texas Assessment of Academic Skills [TAAS] test pass rates. The SAT and ACT are tests are college admissions tests and are taken only by students who intend to go to college. Because the sample subjects for these measures are self-selected, I expect these two measures to reflect the top performers in the school. Additionally, because the tests in this case are designed to measure variance in the higher percentiles, there is a minimum of variance available.

The TAAS test is a measure of basic scholastic skills mandated by the state of Texas. Students take the TAAS exam at several different points in their academic career in Texas. This indicator is the percentage of students who pass all parts of the TAAS exam in each school district. In addition to the scholastic performance measures, I include an attendance measure. This measure is a mean percentage of students who attend class on any given day.

Independent Variables

The key variable in question in this model is the superintendent perceptions of violence as a problem in the school district. All additional variables in this model are strictly for control purposes.

Control Variables

There are several important factors in predicting school performance. To ensure that any and all organizational constraints are accounted for, I include a several indicators of school district environmental constraints and organizational resources. The first are the percentages of minority students in the district. Minority students do not perform as well as Anglo students on measures of academic performance (Meier et al. 2002; Jencks and Philips 1998; Meier and Stewart 1991); therefore, I include the percentage of Black and the percentage of Latino students for each school district.

A second major factor in student performance is poverty. Students who are from poor families are handicapped in several ways. They will lack resources at home that would otherwise enhance performance. They also are more likely to have unstable families, be from single parent homes or even homeless. These factors will negatively impact student performance (Necochea and Cune 1996), and in turn, affect the district. Additionally, poverty is highly correlated with violence in society (USDOJ 2002).

Available resources are important to a school's ability to educate children. To control for the possible differences between schools I include measures of instructional expenditures per student and state aid to the school. Incoming resources are not the only limits on resources in schools. Specialized learning programs draw resources away from

the general population and focus them on specific groups. I control for this by including measures of students in bilingual education programs and gifted programs.

Education performance should also be a function of the teaching staff. Schools that pay more to the teachers should be able to attract better teachers. Additionally, teachers with more experience should be more able than their junior counterparts to convey information to the students. I control for teacher experience and quality by including the average teacher salary and percent of teachers with five or more years experience.

Finally, a major prerequisite for learning in school is actually being in school. Students that attend class must perform better than those who do not. For this reason, I include an attendance measure of the average percent of students attending class on any given day.[23] Descriptive statistics for all variables used in the analysis are available in Table 5.5.

Results

The first important step in assessing the impact of multiple goals is to establish a baseline relationship between the variables of interest. I model the education production function against each dependent variable to identify the correlation between attention to violence and scholastic performance. I find no statistically significant correlation between ACT and SAT scores and attention to violence in schools using traditional OLS.

[23] I exclude this variable from the model where attendance is the dependent variable for obvious reasons.

Table 5.5
Summary Statistics for Superintendent Model

Variable	Mean	Std. Dev.
% Black Students	8.07	12.13
% Latino Students	27.15	26.73
% Students low income	46.78	19.29
% Students in bilingual programs	5.81	9.33
% Students in gifted programs	7.58	3.73
Attendance rate	95.87	.95
TAAS all students	80.09	9.76
TAAS Black students	64.34	14.35
TAAS Latino students	71.50	12.59
TAAS White students	86.02	7.88
Mean SAT	973.44	70.15
Mean ACT	19.87	1.67
Average teacher salary	32127.49	2233.35
Student teacher ratio	12.93	2.45
Teacher experience	11.77	2.26
% Teachers w/ advanced degrees	20.55	10.29
% Funding from state	54.01	22.65
Expenditures per student	3314.08	817.34
Violence focus measure	7.19 e-10	.97

Not finding correlation between these indicators of top performing students and attention to violence in schools could have several possible meanings. First, because these tests are designed to capture variance at the top of the distribution, there is simply not enough variance overall to reflect an underlying relationship. This could also mean simply that students who have suffered from the shift of academic focus have opted not to take the test. Alternatively, it could be that the top performers in the school are

shielded from the negative effects of goal conflict by being a part of a sheltered group. This would include honors programs and gifted programs that are competing goals with violence reduction. I suspect that specialized goals such as these would be the last to suffer ill-effects from organizational goal conflict. Programs that should be more likely to suffer would be the general academic focus. This is because the general academic achievement of the school is a more varied and diverse goal than the specialized honors programs.

Next, I evaluate attendance as a function of violence programs and our production function. Logically, students who do not feel safe in school are going to be more likely to attend if they believe the environment is safe. I am suggesting that districts that have shifted focus and resources to violence programs are going to spend less time and money on programs that attract students to school. If students do not feel safe, they will not attend school. However, students who do not enjoy school are less likely to attend than those who do. If the student has no concerns for safety, then lack of friends or meaning in the school will motivate a student to skip from time to time (Maslow 1987). Table 5.6a shows a negative, significant relationship between attention to violence and average attendance rates in schools. As I suspect, shifting attention to more basic needs (safety) may cause students to become disinterested in the goings on in schools.

Table 5.6a
The Impact of Violence Prevention Spending on School Attendance

Dependent Variable = Student Attendance	
Independent Variables	*Coefficient*
Violence Prevention (k)	-.1425***
Control Variables:	
Percent Black	-.0081**
Percent Latino	.0047*
Low Income	-.0203***
Gifted	.0078
Teacher Salary (k)	-.0001**
Class Size	-.0676**
Percent Teachers with Advanced Degrees	-.0006
Teacher Experience	.0779***
State Aid	.0045**
Instructional Funds (k)	.0002***
Constant	97.4589***
F	17.18
Prob > F	.0000
N	415

Robust regression estimates
*** Significant at the .01 level
** Significant at the .05 level
* Significant at the .1 level

Shifting focus to the more general goal of district academic achievement, I modeled pass rates on the TAAS exam using our education production function and a weighted least squares model. I first evaluate the pass rates for all students, and then examine pass rates by ethnicity group. I limit the ethnic groups to Black and Hispanic as these are the only race/ethnicity groups with sufficient variance in the sample. I do not address the effect of violence on white students because it is reasonable to suspect the effect on white students will closely mirror the general population except in districts with high minority populations. The results of these models are displayed in Tables 5.6 b-d.

For the general population, I find that attention to violence reduces the overall pass rate controlling for all other influences. That is, the more districts divert attention to violence programs, the more the basic academic achievement of the school suffers. More interestingly, although the relationship between these variables is strong, the size of the coefficient increases as I move through populations. The violence program indicator has a coefficient of -.9988 for the general population, -1.0723 for Latino students, and -1.8955 for Black students. These figures certainly provide some support for the hypothesis that varying groups feel disparate effects of programs implemented in schools. Additionally, examining confidence intervals around the estimates shows that the slope for violence in the general population is bounded at a 95% confidence interval at -1.6676 and -.3299. Finally, I should note that there is a significant positive relationship between attendance and performance. There is a good chance that this may indicate a spurious relationship. It could be that attendance and attention to violence are functions of one another or some third variable. I suspect that if this were the case I would see more traditional signs of collinearity in the models.

Table 5.6b
The Impact of Violence Prevention on TAAS Scores

Dependent Variable = TAAS Score, All Students	
Independent Variables	*Coefficient*
Violence Prevention	-.9988**
Control Variables:	
Percent Black	-.2143***
Percent Latino	-.1254***
Low Income	-.1055***
Gifted	.0723
Attendance	2.5190***
Teacher Salary (k)	.0005*
Class Size	.3210
Percent Teachers with Advanced Degrees	.0132
Teacher Experience	-.0347
State Aid	-.0174
Instructional Funds (k)	.0017**
Constant	-176.6380**
F	44.00
Prob > F	.0000
N	414

Robust regression estimates
*** Significant at the .001 level
** Significant at the .01 level
* Significant at the .05 level

Table 5.6c
The Impact of Violence Prevention on Black Students' TAAS Scores

Dependent Variable = TAAS Score, Black Students Only	
Independent Variables	*Coefficient*
Violence Prevention	-1.8955**
Control Variables:	
Percent Black	-.1031
Percent Latino	.0217
Low Income	-.1031
Gifted	.2448
Attendance	1.8847
Teacher Salary (k)	.0008
Class Size	1.1170*
Percent Teachers with Advanced Degrees	-.8644
Teacher Experience	-.0866
State Aid	.0266
Instructional Funds (k)	-.0020
Constant	-137.1253
F	4.02
Prob > F	.0000
N	268

Robust regression estimates
*** Significant at the .01 level
** Significant at the .05 level
* Significant at the .1 level

Table 5.6d
The Impact of Violence Prevention on Latino Students' TAAS Scores

Dependent Variable = TAAS Score, Latino Students Only	
Independent Variables	*Coefficient*
Violence Prevention	-1.0723*
Control Variables:	
Percent Black	-.0999*
Percent Latino	-.0972***
Low Income	-.0462
Gifted	.1812
Attendance	2.4078***
Teacher Salary (k)	.0011***
Class Size	.4952
Percent Teachers with Advanced Degrees	-.0601
Teacher Experience	.0892
State Aid	.0297
Instructional Funds (k)	.0006
Constant	-201.0607***
F	7.86
Prob > F	.0000
N	379

Robust regression estimates
*** Significant at the .01 level
** Significant at the .05 level
* Significant at the .1 level

It is clear that when a school district shifts its attention to violence, student performance suffers. These models also suggest that minority students may suffer a disproportionate share of the negative effects.

Clearly this system demonstrates significant negative externalities from the policy choices. This is to be expected based on my second hypothesis, but why are these externalities persistent? Perhaps the problem is that in subsystems of high uncertainty, the problems with intertwining goals and values with empirical evaluation leads the non-professional participants in the system to a subjective finding of success instead of success gauged by objective criteria. This idea mates nicely with Meier's (1993) contention that individuals do not tend to take the perceived negative side of an issue area in areas of morality politics. This would indicate that:

H3: In areas of high uncertainty, outcomes are less important that actions

This is to say that in systems where uncertainty is high, non-professionals will be pleased by the appearance of outcomes more than actual measures of outcomes. To assess this contention, it is necessary to examine the actual policy outputs of the systems.

School Violence Outputs

While the preceding models do shed some light on the secondary effects of the policy process of school violence, it does not answer one very important question, that is, do school violence problems actually reduce violence? There is a long literature addressing this question in the short run, however, the sum total seems to indicate mixed results. While many districts report positive outcomes, numerical support for these claims are lacking (see NCES 2005). The data used in this study are not optimum for gaining leverage on this question, as they lack clear times for the policy interventions.

This said, we can compare schools that adopt these policies in respect to those that are unable to.

Tables 5.7a-d compare schools with given violence programs to those that do not. Table a compares these groups across the violence level within the school, Table 5.7b compares across the community violence, Table 5.7c compares by the percent of students that are from low income homes and Table 5.7d compares across the percentage of students who are white. Interestingly, these simple comparisons provide little evidence to support the effectiveness of any given program.

Table 5.7a
Regression of School Violence with Prevention Programs

Dependent Variable : School Violence Measure

Variable	**β**	**s.e.**	**P**
Metal Detectors in Schools	-0.1595	0.1827	0.38
Locker Inspections in Schools	0.1668	0.1223	0.17
Police Officer In Schools	-0.1988	0.1239	0.11
Student Counseling Programs	0.0992	0.1419	0.49
Teacher Counseling Programs	-0.001	0.12	0.99
School Response Plans	0.0796	0.1355	0.56
Community Response Plans	-0.3001	0.145	**0.04**
Constant	-0.0433	0.1313	0.74
N	413.00		
F(7, 405)	1.75		
Prob > F	0.10		
R Squared	0.03		
Root MSE	1.12		

Table 5.7a indicates that the only program that actually correlates with reduced levels of violence within the schools are community response plans. Strangely, these are programs not designed to reduce violence, but to provide comprehensive response to violence. Similarly, Table 5.7b compares the effect of these programs in relation to the violence in

the surrounding community. I would expect that if policy adoption was in response to violence in the community, there should be correlation between these programs and the levels of violence in the surrounding community. Strangely, Table 5.7b only reveals a relationship between police officers in the school and higher levels of community violence.

Table 5.7b
Regression of Community Crime with Prevention Programs

Dependent Variable: Community Crime Rate

Variable	β	s.e.	P
Metal Detectors in Schools	1.5277	2.6770	0.57
Locker Inspections in Schools	-1.3027	1.8525	0.48
Police Officer In Schools	9.3983	1.8827	**0.00**
Student Counseling Programs	1.1226	2.2053	0.61
Teacher Counseling Programs	2.0668	1.8100	0.25
School Response Plans	2.0100	2.0851	0.34
Community Response Plans	-2.3161	2.1596	0.28
Constant	28.0256	1.9971	0.00
N	455.00		
F(7, 413)	5.48		
Prob > F	0.00		
R Squared	0.08		
Root MSE	17.85		

Table 5.7c examines the relationship between these programs and low income families in the district. As crime increases with poverty, I would expect to see correlation between the existence of these programs and larger percentages of low income students. Consistent with the previous two tables, there is little in the way of significance to be found. What we do see is that community action plans are less frequent in districts with a higher percentage of low income families.

Table 5.7c
Regression of Low Income Students with Prevention Programs

Dependent Variable: Percent of Students from Low Income Homes

Variable	β	s.e.	P
Metal Detectors in Schools	-0.5330	3.2779	0.87
Locker Inspections in Schools	-3.6242	2.1746	**0.10**
Police Officer In Schools	1.5760	2.2047	0.48
Student Counseling Programs	0.9322	2.5106	0.71
Teacher Counseling Programs	1.5502	2.1361	0.47
School Response Plans	-2.8823	2.4011	0.23
Community Response Plans	-4.7116	2.5836	**0.07**
Constant	49.8201	2.3312	**0.00**
N	421.00		
F(7, 413)	1.59		
Prob > F	0.14		
R Squared	0.03		
Root MSE	20.20		

This is not a surprising finding as it seems to fit well with the political participation literature. Finally, Table 5.7d examines the relationship between these programs and the percentage of students who are white.

White students reflect more than simply the diversity of the student body. White the percentage of white students correlates roughly with district wealth, and should act as a surrogate measure for socioeconomic status in the model. What this table shows is a decrease in police officers stationed in the schools and an increase in locker inspections. Each of these four tables show some covariation, but taken as a whole really shed little leverage on the question of efficacy of school violence policies. More interestingly, the covariation that does exist would seem to be more consistent with political pressure than it would with policy outcomes.

Table 5.7d
Regression of Percent White Students with Prevention Programs

Dependent Variable: Percent of Students who are White			
Variable	**β**	**s.e.**	**P**
Metal Detectors in Schools	-5.1845	4.1595	0.21
Locker Inspections in Schools	6.1616	2.7594	**0.03**
Police Officer In Schools	-10.9420	2.7977	**0.00**
Student Counseling Programs	-2.6345	3.1858	0.41
Teacher Counseling Programs	-0.3419	2.7106	0.90
School Response Plans	0.9708	3.0469	0.75
Community Response Plans	-0.5509	3.2785	0.87
Constant	65.9127	2.9582	**0.00**
N	421.00		
F(7, 413)	3.59		
Prob > F	0.00		
R Squared	0.06		
Root MSE	25.64		

Conclusion

This chapter serves three main functions. First, it evaluates the state of the school violence subsystem in relation to my theoretic expectations. Next, it identifies who is influential in the policy subsystem of school violence. Finally, it evaluates the outcomes of the increasing importance of violence in our schools. What it does not do is deal with the immediate outputs of violence policies. I will address each of these in order.

Theoretic Expectations

Although this is a large dataset, this chapter serves more as a case study for my theoretic expectations about uncertainty in a subsystem. In this chapter and the previous one, I have identified many sources of uncertainty in the subsystem. Based on this, I expect that decision making in this subsystem will certainly be anything but rational-comprehensive. While the findings support this, it is interesting that the system itself is still far more rational in behavior that Kingdon would suggest. This chapter certainly

demonstrates that this particular subsystem is neither rational-comprehensive, nor completely incremental-disjointed. While this is strong support that a system must lie in between these two school of thought, this chapter is certainly not the last word on the subject.

Players in the Subsystem

Obviously, individual teachers and parents are paramount in focusing the superintendent agenda on school policy. This is not surprising, and may be indicative of a larger problem in the policy subsystem. Superintendents pay little attention to the federal actors in the subsystem. Perhaps superintendents implement programs based on federal recommendations; however, this research suggests that they may not take federal appraisals of problems as seriously as concerns raised by local players. This seems to be most serious given the lack of correlation between superintendent concerns about violence and the actual level of violence they encounter. Without unbiased sources of information superintendents may implement recommendations that are unwarranted given the tradeoffs that must take place in organizations as under-funded as schools.

Additional evidence of the over-importance of local players in the policy domain of school violence also obtained through the creation of this research is not yet reported in this work came to light in the data gathering process. That is the lack of national data available relating to violence in schools. Currently there is no national reporting center for data on violence in schools. While there are some national surveys mostly sponsored by the NBER, no federal agency is tasked with gathering and accumulating data. Worse yet, there has been no standardization across states in relation to measure standards or reporting. Without these measures, superintendents will never have an alternative to the

myopic assessment offered by the local community. This is very important especially given the effect this myopic view has on other important school goals.

School Violence Outcomes

The second half of this chapter clearly illustrates the effect of responding to violence in schools. That is as resources are focused on reducing violence, performance on standardized tests and other measures of success fall. This is very important as these programs are no being instituted as a function of violence, but a fallacious assumption of violence. While dropping a few percentage points on TAAS pass rates may not be a large cost to prevent violence in schools, it is a huge cost in schools where violence is not actually a problem.

Violence Policy Outputs

Conspicuously missing from this chapter is an evaluation of the specific outputs of policies instituted within schools. I do not test each specific policy type for two reasons: first, because the level of aggregation is not appropriate, and second because I do not feel that it is necessary.

Because policies are instituted within individual schools, I fear that testing the efficacy at the district level would lead to erroneous outcomes. Conversely, this is not a problem when evaluating the superintendent beliefs because these will permeate the entire district. Additionally, as the superintendent perceptions are not correlated with violence, the effects of the violence control programs on other district outcome measures, there is no trade-off between violence and other programs. There are just shortcomings with other programs.

CHAPTER VI

CONCLUSION

This project began with bold aspirations for understanding extreme violence in schools. Unfortunately the preceding pages do not close the book on the study of school violence. In fact, this work best serves to elucidate the need for continued work in this field. This is not to say that my endeavors have been without benefit. In fact, during this journey, several important aspects of the school violence subsystem have been illuminated. Additionally, the theoretic understanding of *why* violence occurs and how the system copes has been advanced. This final chapter reviews the contributions of this research and elaborates on where the next logical steps should be taken. I break this chapter down into two main sections, the first dealing with the theoretic portion of this work and the second addressing the substantive implications in the school violence subsystem.

Theoretic Contribution

I deal with two theoretic understandings of violence in school. Directly, I use ecological systems theory to gain an expectation of how violence is shaped in schools.

Ecological Systems Theory

This project did not begin with the intention of evaluating ecological systems theory. In fact, I merely present the theory as a base with which to understand violence in schools. Using this theoretic framework was a bit unorthodox as the theory was developed for understanding of the individual. While this is an individual theory, the concept itself does not reject the idea of application in aggregate data. Additionally,

Ecological systems theory fits nicely with the application of the Advocacy Coalition Framework (Sabatier and Jenkins-Smith 1993)

The theory suggests that individual behaviors are the product of multiple, overlapping realms of influence. Each individual is influenced by events in each realm in proportionate to the influence of that system (Lewin 1935, 1951; Bronfenbrenner 1977, 1979; Hobbs 1966; Garbarino 1982; Garbarino et al. 1992). This would indicate that events within the Microsystems would have far more influence to the individual than would the other three systems. If we model the effects of events in each system on an individual as a linear function:

$$Y_{(effect)} = \beta_0 + \beta_{1(micro)} + \beta_{2(meso)} + \beta_{3(exo)} + \beta_{4(macro)} + \varepsilon$$

Ecological systems theory expects that:

$$\beta_1 > \beta_2 > \beta_3 > \beta_4$$

While my evaluation of this theory is not quite as straight forward as the above, my findings support the general hypothesis that events within the microsystem have more effect than events within the macrosystem. This conclusion is based on a rather simple set of tests in Chapters II and III. To examine violence in schools, I first had to create an indicator of violence within the school district. I did this by creating a factor score from the base counts of violent incidents within the school district. This indicator represents a relative measure of the violence within each school district. I then repeated the procedure to produce a measure of violence within the community. The dependent variable used in the later chapters is simply the residual variation of the school violence indicator after

being regressed on the community violence indicator. Interestingly, when I compare the R-squared statistic between the first regression used to purge the variance in the indicator that covaries with the community violence indicator and the later regressions, the explanatory power of the community violence is significantly less than that of the school factors.

Table 6.1
Adjusted R-Square Values for Successive Regression Predicting School Violence Indicator

Predictor	Adjusted R-Square
Community Violence	0.0551
School Factors	0.3358

As Table 6.1 clearly shows, the predictive power of the school is far greater than that of the community. Additionally, this test is more conservative than estimating the two sets of covariates simultaneously as running the regressions separately means that any covariance between the independent variables will be attributed to community effects and not to the effect of the schools.

Obvious flaws are present in the simplicity of this test. Specifically, the community violence indicator is generated by using adult crime. I make a leap of faith assuming that the juvenile crime rate in any given area will mirror that of the adult. Additionally, both the school violence and community violence crime counts are inherently flawed. While these are legitimate criticisms, I contend that these findings are robust simply based on the dramatic difference in the magnitude. Schools can and do impact the levels of violence within their walls. This is what should be theoretically expected based both on ecological systems theory and the majority of the institutions

literature. The bottom line is that schools matter. I am not, however, confident enough in these simple models to make statements as to how much schools matter. While it is obvious that the effect is greater than that of the surrounding community, I am not convinced that these separate models fully capture the dynamic of the relationship. In fact, I am quite positive that with the given data it is impossible to map out the complete roads of causality in this area. Certainly this topic deserves and will in the future see a far more thorough treatment.

For this project, it is important to be able to state that schools matter in the area of controlling violence. This finding is important because not only do I find that they matter, but they may also be the most important factor.

Advocacy Coalitions Framework

In Chapter IV, I spend a great deal of time mapping out the advocacy coalition framework. This is because if schools matter in the control of violence the next important step in evaluating the school violence subsystem is to evaluate how policy is made, evaluated and adapted. I choose the ACF as a theoretic frame for several reasons. First, it is developed to examine the interaction between players within the subsystem. Second, it is the most intricate treatment of the policy subsystem, and finally because it is emphasizes the feedback loop. Unfortunately, the ACF has several limiting factors for application in this type of evaluation.

The first major drawback to the ACF is that is was conceived and developed on the individual level. In fact, the ACF is typically used to examine only one subsystem at a time. To data there is a vast literature using the ACF yet it is not routinely used for

aggregate analysis nor for cross subsystem analysis. This is unfortunate, but expected given the nature of the framework.

The ACF is a very detailed theoretic framework. Many shortcomings in literature testing the ACF can be attributed to the very soft definitions the framework offers for coalitions, and beliefs (Sabatier 2004). Based on the principles of morality policy, I assume away many of the problems which may surround the definitions of beliefs. Additionally, I make the assumption that the actors in each of the many school districts have homogeneous groupings and similar beliefs. Obviously, these are both heroic assumptions; however, I do not think that they are entirely untenable.

A second major drawback to the ACF in this analysis is that it expects a subsystem that has been in place for more than a year. While I argue school violence has been around for more than two score years, an important feature to this study is that the subsystem currently in place was not in place for this extended time. The issue of school violence was instantaneously redefined following the events at columbine, and at the time of this analysis was still very much in flux. This flaw is the major theoretic contribution to this project.

In Chapter IV, I hypothesize that when the system is in flux there will be high degrees of ambiguity in the subsystem. I further hypothesize that when there are high degrees of ambiguity subsystem decision making will change from a rational process to one more similar to a garbage can model. The evidence in this project supports this claim. Chapter V clearly demonstrates that superintendent opinion is closely linked to parent beliefs. Table 5.4 clearly demonstrates that individual parents have the strongest effect on superintendent impressions of violence within the district. This is followed only

by teachers. What is interesting about this phenomenon is that the superintendent beliefs are not correlated with the actual levels of violence within the school. The feedback loop in the system is not transferring correct evaluations of the situation. Additionally, Chapter V also indicates that many of the solutions instituted in schools have no discernable effect or are being implemented in areas where there is no problem to begin with.

Plainly, this evidence shows that there is a high degree of ambiguity in the system. The evidence indicates that there is not a rational decision making and far worse not a rational evaluation of the system feedback in the loop. My claim in Chapter IV is that the system would appear more like a garbage can model of decision making (Kingdon 1984); however, this is not wholly correct. Additional evidence indicates that while there is no logic in the evaluation of violence as a problem, that the streams of problems and policies are not separate. That is the superintendent is not matching parent problems to solutions from other streams. My assumption is that the process is still one of a "garbage can" in that solutions are being paired with problems, but I assume that this is happening within the coalition and not in the larger system. Perhaps then it is better to re-label my figure in Chapter IV from assuming a continuum between multiple streams and punctuated equilibrium to simply one between bounded rationality and rationality. It would seem though that my assumptions are correct that in the case of school violence we have a system that acts in an irrational manner due to the high degree of ambiguity in the system. Problem identifiers are matching solutions to problems without rationally identifying the system or evaluating the effectiveness of the system.

A major problem with the assessment of policy today is the huge number of theories (McCool 1997), variables (Meier 2000), and areas covered by this interdisciplinary field of study (Sabatier 1999). We work in an area where we have multiple lower level theories with no overarching theory or overarching theory that is too general. Worse yet, we evaluate these theories in an environment governed by professional norms that are counterproductive to incremental advancement.

There are few journals that offer a scholarly outlet for public policy and even fewer that are considered to be of any quality. The journals that do exist place far more value on revelation than refinement. Because academic success is gauged weighted more heavily for publications than other forms of professional development, success is most easily obtained through proliferation rather than originality. Certainly, I am being a bit too general here; however, there are far more researchers who have risen in our ranks via reiteration rather than by having substantive contributions.

Strangely, in a quest for a more scientific approach to the study of policy, we as a discipline reward dynamic change instead of incremental. By evaluating a policy system during an exogenous shock using the ACF I do exactly what the ACF is not meant to do. I do this intentionally because the first step in answering Meier's call for reducing the number of variables in the study of policy and to begin to reach for midlevel and higher theory is to push the limits of existing theories. While there have been volumes of manuscripts written testing and reaffirming the ACF theory, the vast majority of these papers test this in the same manner as it was originally developed.

At the end of the day, the major theoretical contribution from this manuscript is that the ACF can and should be developed into a more flexible system. This tome does

not adequately test many of my propositions concerning the ACF, but it does demonstrate that it can be done. The next step in the evolution of the systems theory school of thought will be to push these boundaries of the ACF to allow for more rigorous tests of its hypotheses and generation of new adaptive ones. While this infinitesimal, incremental step for the ACF is both interesting and important, the real thrust of this manuscript concerns violence in schools and how it is dealt with.

Substantive

This book deals with a very important question, how do we make schools safe for our children? What I find is that we still do not know. Violence becomes a priority for the district when parents and teachers become concerned with the problem. Unfortunately, it would seem from the evidence in the preceding chapter, that parental and teacher violence appraisals are based more on anecdotal evidence or perhaps media exposure than actual levels of violence within the school. Additionally, the data at hand show no effect of those policies adopted. In fact, the only effects of the anti-violence policies detected in this study are negative effects on school performance measures. These secondary effects seem a high price to pay for peace of mind from a fictional problem, and an inequitable price to pay for minorities to boot. By "fictional problem" I do not mean to day that there is no such problem as school violence, only that when problem identification is a function of individuals intimate to the school, often the evaluation is subjective instead of objective.

Substantively, this study does more than just identify the problems with the system, and that is it highlights the greatest problems in the policy process. In the case of this policy arena, the largest limitation is that of information. As stated earlier, there is

no existing national system for tracking violence in American schools. A large part of the reason no national tracking exists is due to the history of schools in America. For the most part, schools have always been a function of the state and local governments and even now Federal involvement is only marginal (see Chapter II). Although the past two presidents have made education and safety in schools a corner stone of their respective campaigns, no real effort has been made to tackle the actual problem. Without good data, policy effects can never be honestly evaluated and thus, there is no ability to refine the policies meant to cope with this problem.

A second reason for the lack of systematic data on this problem stem from the nature of the problem. As I pointed out in Chapter I, much of the work in this area is normative in nature. That is to say that the majority of research is descriptive in nature. Because this is an area of morality, the emotions elicited by the slaughter of the young tend to trump dispassionate systematic evaluation.

Finally, what data do exist are maintained on the state level. Currently, not all states track violence in schools and those that do are not working with common measures. This means that those data that do exist are not comparable and cannot be used to compare across systems. While some states do have comparable numbers, many do not maintain the data in a usable format. This dramatically raises the cost of access. Other states are simply not willing to release this type of data for fear of "airing dirty laundry." Those states that do, frequently suffer for their good efforts. For instance, Texas and Florida are both very responsive to data requests. Both even have a large sum of the data available on line. Because Texas education data is so readily available, bureaucrats in the Texas Education Agency had to suffer an unrelenting onslaught of

criticism during the 2000 presidential elections as then Governor Bush was a candidate with a platform that covered education. The real question should not have been whether education in Texas was poor, but if it was really any worse than any other state that does not provide performance measures for comparison purposes. Often, when you are the only visible target you get shot! The state of Texas and the Texas Education Agency should be praised for their openness and should be held as a model for other states to follow. But, basically, until there is centralization over monitoring and regulation of this problem area, research will be limited to small samples with only poor findings.

Centralization of this problem area will do more than just provide comprehensive data, it will also remove some degree of subjectivity from the evaluation of the problem. Participatory government is certainly a good thing, however, too much of a good thing is not always great. Like many policy areas, violence in schools is one where zero tolerance is the only acceptable answer, but we are not dealing with an environment of certainty. School violence and extreme school violence is merely a game of probability at which we are working on the extreme margin. The actual probability of death or extreme violence in the average school is infinitesimal. If we select on a few criteria such as urban and low income, the probability increases, but only marginally. The real question here should be the trade-off between the probability of violence and the probability of success in academics. This is an important trade-off, because lack of functional skills can be as devastating to an individuals' future as a gunshot.

While violence is appalling, the nation's schools are heading in the right direction. What is interesting about this work is that none of this change can be attributed to the policies specifically targeting violence. Perhaps the renewed vigor in educational

attainment highlighted by the Clinton and Bush II administrations have had positive externalities with violence as well. Unfortunately, until there are national aggregate data for this we will never be sure. In the closing, though, this manuscript offers more than a simple argument against policies to prevent violence.

First, theory in public policy is stagnant and will remain so until the incentive structure and participants in the system evolve. It is a shame that significance tests are rewarded over creativity. Subsystems have evolved, and the ACF is a nice heuristic for the process. This evolution must and can continue. We can build higher level theories by incorporating many of our current models. My limited blend of the ACF and PE is only a beginning. We need to understand that the openness of systems to the environment goes beyond the ACF and in only scratched in the networking literature. We need to devise falsifiable hypotheses and test these midrange theories in and across multiple policy arenas.

Second, and most importantly, schools and teachers have many problems. Chief among these problems is a reactionary approach to policy. Perhaps instead of asking schools to do more with less, we should reverse this trend. Perhaps we should expect smart kids from schools and not good citizens, great athletes, or broad-minded activists. I would say that the most important fact in this paper is not that the policies do not help, but that they hurt. And the force driving this hurt is begins at the local level.

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